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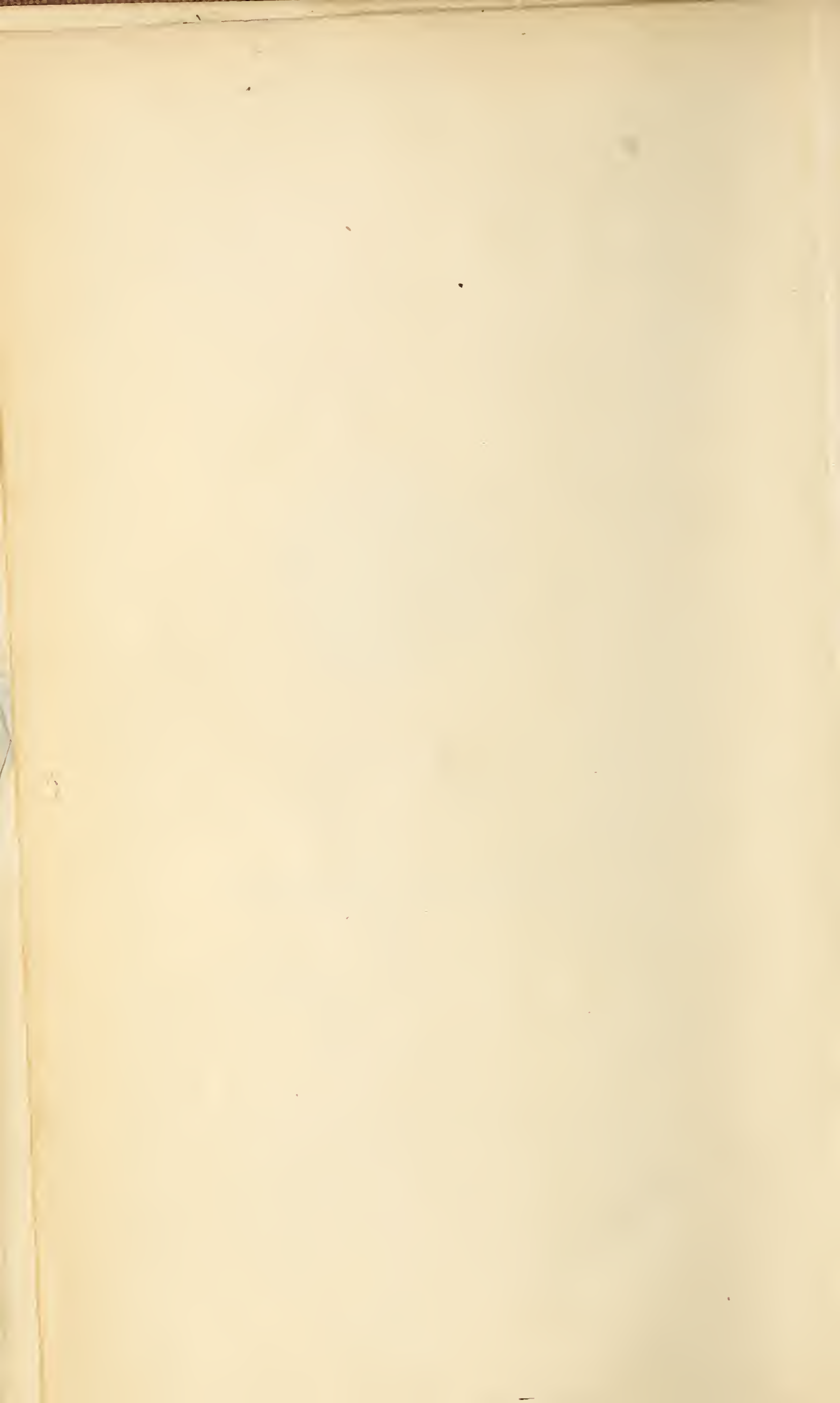
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I

TITI LUCRETI CARI

DE RERUM NATURA

LIBRI SEX

VOLUME I

~~19424~~
~~19424~~
TIT LUCRETI CARI

DE RERUM NATURA

LIBRI SEX

WITH A TRANSLATION AND NOTES

BY

H. A. J. MUNRO M.A.

FELLOW OF TRINITY COLLEGE CAMBRIDGE



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THESE VOLUMES ARE DEDICATED
BY HIS FORMER PUPIL THE EDITOR

T. LUCRETI CARI

DE RERUM NATURA

LIBER PRIMUS

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Aeneadum genetrix, hominum divomque voluptas,
alma Venus, caeli subter labentia signa
/ quae mǎrē nāvīgērūm, quāe tērras frūgiferēntis
concelebras, per te quoniam genus omne animantum
concipitur visitque exortum lumina solis, 5
te, dea, te fugiunt venti, te nubila caeli
adventumque tuum, tibi sūāvis daedala tellus
summittit flores, tibi rident aequora ponti
placatumque nitet diffuso lumine caelum.
nam simul ac species patefactast verna diei 10
et reserata viget genitabilis aura favoni,
aeriae primum volucres te, diva, tuumque
significant initum percussae corda tua vi.
15 inde ferae pecudes persultant pabula laeta
14 et rapidos tranant amnis: ita capta lepore 15

Mother of the Aeneadae, darling of men and gods, increase-giving Venus, who beneath the gliding signs of heaven fillest with thy presence the ship-carrying sea, the corn-bearing lands, since through thee every kind of living things is conceived, rises up and beholds the light of the sun. Before thee, goddess, flee the winds, the clouds of heaven; before thee and thy advent; for thee earth manifold in works puts forth sweet-smelling flowers; for thee the levels of the sea do laugh and heaven propitiated shines with outspread light. For soon as the vernal aspect of day is disclosed, and the birth-favouring breath of favonius unbarred is blowing fresh, first the fowls of the air, o lady, shew signs of thee and thy entering in, thoroughly smitten in heart by thy power. Next the wild herds bound over the glad pastures and swim the rapid rivers: in such wise each made prisoner by thy charm follows thee with desire,

te sequitur cupide quo quâunque inducere pergis.
 denique per maria ac montis fluviosque rapacis
 frondiferasque domos avium camposque virentis
 omnibus incutiens blandum per pectora amorem
 efficis ut cupide generatim saecula propagent. 20
 quæ quoniam rerum naturam sola gubernas
 nec sine te quicquam diâs in luminis oras
 exoritur neque fit laetum neque amabile quicquam,
 te sociam studeo scribendis versibus esse
 quos ego de rerum natura pangere conor 25
 Memmiadae nostro quem tu, dea, tempore in omni
 omnibus ornatum voluisti excellere rebus.
 quo magis aeternum da dictis, diva, leporem.
 effice ut interea fera moenera militiâi
 per maria ac terras omnis sopita quiescant. 30
 nam tu sola potes tranquilla pace iuvare
 mortalis, quoniam belli fera moenera Mavors
 armipotens regit, in gremium qui saepe tuum se
 reicit aeterno devictus vulnere amoris
 atque ita suspiciens tereti cervice reposta 35
 pascit amore avidos inhians in te, dea, visus,
 eque tuo pendet resupini spiritus ore.
 hunc tu, diva, tuo recubantem corpore sancto

whither thou goest to lead it on. Yes throughout seas and mountains
 and sweeping rivers and leafy homes of birds and grassy plains, striking
 fond love into the breasts of all thou constrainest them each after its
 kind to continue their races with desire. Since thou then art sole
 mistress of the nature of things, and without thee nothing rises up into
 the divine borders of light, nothing grows to be glad or lovely, I would
 have thee for a helpmate in writing the verses which I essay to pen
 on the nature of things for our own son of the Memmii, whom thou,
 goddess, hast willed to have no peer, rich as he ever is in every grace.
 Wherefore all the more, o lady, lend my lays an everliving charm.
 Cause meanwhile the savage works of war to be lulled to rest through-
 out all seas and lands; for thou alone canst bless mankind with calm
 peace, seeing that Mavors lord of battle controls the savage works of
 war, Mavors who often flings himself into thy lap quite vanquished
 by the never-healing wound of love; and then with upturned face
 and shapely neck thrown back feeds with love his greedy sight gazing,
 goddess, open-mouthed on thee; and as backward he reclines, his
 breath stays hanging on thy lips. While then, lady, he is reposing
 on thy holy body, shed thyself about him and above, and pour from

circumfusa super, suavis ex ore loquellas
 funde petens placidam Romanis, incluta, pacem. 40
 nam neque nos agere hoc patriai tempore iniquo
 possumus aequo animo nec Memmi clara propago
 talibus in rebus communi desse saluti. ?

*

quod superest, vacuas auris animumque sagacem 50
 semotum a curis adhibe veram ad rationem,
 ne mea dona tibi studio disposta fideli,
 intellecta prius quam sint, contempta relinquas.
 nam tibi de summa caeli ratione deumque
 disserere incipiam et rerum primordia pandam, 55
 unde omnis natura creet res auctet alatque
 quove eadem rursum natura perempta resolvat,
 quae nos materiem et genitalia corpora rebus
 reddunda in ratione vocare et semina rerum
 appellare suemus et haec eadem usurpare 60
 corpora prima, quod ex illis sunt omnia primis.

Humana ante oculos foede cum vita iaceret
 in terris oppressa gravi sub religione
 quae caput a caeli regionibus ostendebat
 horribili super aspectu mortalibus instans, 65
 primum Graius homo mortalis tollere contra

thy lips sweet discourse, asking, glorious dame, gentle peace for the
 Romans. For neither can we in our country's day of trouble with
 untroubled mind think only of our work, nor can the illustrious offset
 of Memmius in times like these be wanting to the general weal.

*

for what remains to tell, apply to true reason unbusied ears and
 a keen mind withdrawn from cares, lest my gifts set out for you with
 stedfast zeal you abandon with disdain, before they are understood.
 For I will essay to discourse to you of the most high system of heaven
 and the gods and will open up the first-beginnings of things, out of
 which nature gives birth to all things and increase and nourishment,
 and into which nature likewise dissolves them back after their destruc-
 tion. These we are accustomed in explaining their reason to call mat-
 ter and begetting bodies of things and to name seeds of things and also
 to term first bodies, because from them as first elements all things are.

When human life to view lay foully prostrate upon earth crushed
 down under the weight of religion, who shewed her head from the
 quarters of heaven with hideous aspect lowering upon mortals, a man
 of Greece ventured first to lift up his mortal eyes to her face and first

est oculos ausus primusque obsistere contra,
 quem neque fama deum nec fulmina nec minitanti
 murmure compressit caelum, sed eo magis acrem
 inritat animi virtutem, effringere ut arta 70
 naturae primus portarum claustra cupiret.
 ergo vivida vis animi pervicit, et extra
 processit longe flammantia moenia mundi
 atque omne immensum peragravit mente animoque,
 unde refert nobis victor quid possit oriri, 75
 quid nequeat, finita potestas denique cuique
 quam sit ratione atque alte terminus haerens.
 quare religio pedibus subiecta vicissim
 opteritur, nos exaequat victoria caelo.

Illud in his rebus vereor, ne forte rearis 80
 impia te rationis inire elementa viamque
 indugredi sceleris. quod contra saepius illa
 religio peperit scelerosa atque impia facta.
 Aulide quo pacto Triviai virginis aram
 Iphianassai turparunt sanguine foede 85
 ductores Danaum delecti, prima virorum.
 cui simul infula virgineos circumdata comptus
 ex utraque pari malarum parte profusast,
 et maestum simul ante aras adstare parentem

to withstand her to her face. Him neither story of gods nor thunderbolts nor heaven with threatening roar could quell, but only stirred up the more the eager courage of his soul, filling him with desire to be the first to burst the fast bars of nature's portals. Therefore the living force of his soul gained the day: on he passed far beyond the flaming walls of the world and traversed throughout in mind and spirit the immeasurable universe; whence he returns a conqueror to tell us what can, what cannot come into being; in short on what principle each thing has its powers defined, its deepset boundary mark. Therefore religion is put under foot and trampled upon in turn; us his victory brings level with heaven.

This is what I fear herein, lest haply you should fancy that you are entering on unholy grounds of reason and treading the path of sin; whereas on the contrary often and often that heinous religion has given birth to sinful and unholy deeds. Thus in Aulis the chosen chieftains of the Danai foremost of men foully polluted with Iphianassa's blood the altar of the Trivian maid. Soon as the fillet encircling her maiden tresses shed itself in equal lengths adown each cheek, and soon as she saw her father standing sorrowful before the altars and beside him the

sensit et hunc propter ferrum celare ministros 90
 aspectuque suo lacrimas effundere civis,
 muta metu terram genibus summissa petebat.
 nec miserae prodesse in tali tempore quibat
 quod patrio princeps donarat nomine regem;
 nam sublata virum manibus tremibundaque ad aras 95
 deductast, non ut sollemni more sacrorum
 perfecto posset claro comitari Hymenaeo,
 sed casta incestu nubendi tempore in ipso
 hostia concideret mactatu maesta parentis,
 exitus ut classi felix faustusque daretur. 100
 tantum religio potuit suadere malorum.

Tutemet a nobis iam quovis tempore vatum
 terri loquis victus dictis desciscere quaeres.
 quippe etenim quam multa tibi iam fingere possunt
 somnia quae vitae rationes vertere possint 105
 fortunasque tuas omnis turbare timore!
 et merito; nam si certam finem esse viderent
 aerumnarum homines, aliqua ratione valerent
 religionibus atque minis obsistere vatum.
 nunc ratio nulla est restandi, nulla facultas, 110
 aeternas quoniam poenas in morte timendumst.

ministering priests hiding the knife and her countrymen at sight of her shedding tears, speechless in terror she dropped down on her knees and sank to the ground. Nor aught in such a moment could it avail the luckless girl that she had first bestowed on the king the name of father. For lifted up in the hands of the men she was carried shivering to the altars, not after due performance of the customary rites to be escorted by the clear-ringing bridal song, but in the very season of marriage stainless maid mid the stain of blood to fall a sad victim by the sacrificing stroke of a father, that thus a happy and prosperous departure might be granted to the fleet. So great the evils to which religion could prompt!

You yourself some time or other overcome by the terror-speaking tales of the seers will seek to fall away from us. Ay indeed, for how many dreams may they now imagine for you, sufficient to upset the calculations of life and trouble all your fortunes with fear! And with good cause; for if men saw that there was a fixed limit to their woes, they would be able in some way to withstand the religious scruples and threatenings of the seers. As it is, there is no way, no means of resisting, since they must fear after death everlasting pains. For they

ignoratur enim quae sit natura animai,
 nata sit an contra nascentibus insinuetur,
 et simul intereat nobiscum morte dirempta
 an tenebras Orci visat vastasque lacunas 115
 an pecudes alias divinitus insinuet se,
 Ennius ut noster cecinit qui primus amoeno
 detulit ex Helicone perenni fronde coronam,
 per gentis Italas hominum quae clara clueret;
 etsi praeterea tamen esse Acherusia templa 120
 Ennius aeternis exponit versibus edens,
 quo neque permaneant animae neque corpora nostra,
 sed quaedam simulacra modis pallentia miris;
 unde sibi exortam semper florentis Homeri
 commemorat speciem lacrimas effundere salsas 125
 coepisse et rerum naturam expandere dictis.
 quapropter bene cum superis de rebus habenda
 nobis est ratio, solis lunaeque meatus
 qua fiant ratione, et qua vi quaeque gerantur
 in terris, tum cum primis ratione sagaci 130
 unde anima atque animi constet natura videndum,
 et quae res nobis vigilantibus obvia mentes
 terrificet morbo adfectis somnoque sepultis,
 cernere uti videamur eos audireque coram,

cannot tell what is the nature of the soul, whether it be born or on the contrary find its way into men at their birth, and whether it perish together with us when severed from us by death or visit the gloom of Orcus and wasteful pools or by divine decree find its way into brutes in our stead, as sang our Ennius who first brought down from delightful Helicon a crown of unfading leaf, destined to bright renown throughout Italian clans of men. Though yet with all this Ennius sets forth that there are Acherusian quarters, publishing it in immortal verses; though in our passage thither neither our souls nor bodies hold together, but only certain idols pale in wondrous wise. From these places he relates that the ghost of everliving Homer uprose before him and began to shed salt tears and to unfold in words the nature of things. Wherefore we must well grasp the principle of things above, the principle by which the courses of the sun and moon go on, the force by which every thing on earth proceeds, but above all we must find out by keen-sighted reason what the soul and the nature of the mind consist of, and what thing it is which meets us and frightens our minds when we are awake and under the influence of disease and when we are buried in sleep, so that

morte obita quorum tellus amplexatur ossa. 135

—Nec me animi fallit Graiorum obscura reperta
difficile inlustrare Latinis versibus esse,
multa novis verbis praesertim cum sit agendum
propter egestatem linguae et rerum novitatem;
sed tua me virtus tamen et sperata voluptas 140
suavis amicitiae quemvis /sufferre laborem
suadet et inducit noctes vigilare serenas
quaerentem dictis quibus et quo carmine demum
clara tuae possim praepandere lumina menti,
res quibus occultas penitus convisere possis. 145

Hunc igitur terrorem animi tenebrasque necessest
non radii solis neque lucida tela diei
discutiant, sed naturae species ratioque.
principium cuius hinc nobis exordia sumet,
nullam rem e nilo gigni divinitus umquam. 150
quippe ita formido mortalis continet omnis,
quod multa in terris fieri caeloque tuentur
quorum operum causas nulla ratione videre
possunt ac fieri divino numine rentur.

156 quas ob res ubi viderimus nil posse creari 155
de nilo, tum quod sequimur iam rectius inde

seem to see and hear speaking to us face to face them who are dead and whose bones earth holds in its embrace.

Nor does my mind fail to perceive how hard it is to make clear in Latin verses the dark discoveries of the Greeks, especially as many points must be dealt with in new terms on account of the poverty of the language and the novelty of the questions. But yet your worth and the looked for pleasure of sweet friendship prompts me to undergo any labour and leads me on to watch the clear nights through, seeking by what words and in what verse I may be able in the end to shed on your mind so clear a light that you can thoroughly scan abstruse things.

This terror then and darkness of mind must be dispelled not by the rays of the sun and glittering shafts of day, but by the aspect and the law of nature; whose first principle we shall begin by thus stating, nothing is ever gotten out of nothing by divine power. Fear in sooth takes such a hold of all mortals, because they see many operations go on in earth and heaven, the causes of which they can in no way understand, believing them therefore to be done by divine power. For these reasons when we shall have seen that nothing can be produced from nothing, we shall then more correctly ascertain that which we

perspiciemus, et unde queat res quaeque creari
 155 et quo quaeque modo fiant opera sine divom.
 159 Nam si de nilo fierent, ex omnibu' rebus
 omne genus nasci posset, nil semine egeret. 160
 e mare primum homines, e terra posset oriri
 squamigerum genus et volucres erumpere caelo;
 armenta atque aliae pecudes, genus omne ferarum,
 incerto partu culta ac deserta tenerent.
 nec fructus idem arboribus constare solerent, 165
 sed mutarentur, ferre omnes omnia possent.
 quippe, ubi non essent genitalia corpora cuique,
 qui posset mater rebus consistere certa?
 at nunc seminibus quia certis quaeque creantur,
 inde enascitur atque oras in luminis exit, 170
 materies ubi inest cuiusque et corpora prima;
 atque hac re nequeunt ex omnibus omnia gigni,
 quod certis in rebus inest secreta facultas.
 praeterea cur vere rosam, frumenta calore,
 vites autumnno fundi suadente videmus, 175
 si non, certa suo quia tempore semina rerum
 cum confluxerunt, patefit quodcumque creatur,
 dum tempestates adsunt et vivida tellus

are pursuing, both the elements out of which every thing can be produced and the manner in which all things are done without the hand of the gods.

If things came from nothing, any kind might be born of any thing, nothing would require seed. Men for instance might rise out of the sea, the scaly race out of the earth, and birds might burst out of the sky; horned and other herds, every kind of wild-beasts would haunt with changing brood tilth and wilderness alike. Nor would the same fruits keep constant to trees, but would change; any tree might bear any fruit. For if there were not begetting bodies for each, how could things have a fixed unvarying mother? But in fact because things are all produced from fixed seeds, each thing is born and goes forth into the borders of light out of that in which resides its matter and first bodies; and for this reason all things cannot be gotten out of all things, because in particular things resides a distinct power. Again why do we see the rose put forth in spring, corn in the season of heat, vines yielding at the call of autumn, if not because, when the fixed seeds of things have streamed together at the proper time, whatever is born discloses itself, while the due seasons are there and the quickened earth brings its weakly products in safety forth into the borders of

tuto res teneras effert in luminis oras?
 quod si de nilo fierent, subito exorerentur 180
 incerto spatio atque alienis partibus anni,
 quippe ubi nulla forent primordia quae genitali
 concilio possent arceri tempore iniquo.
 nec porro augendis rebus spatio foret usus
 seminis ad coitum, si e nilo crescere possent; 185
 nam fierent iuvenes subito ex infantibu' parvis
 e terraque exorta repente arbusta salirent.
 quorum nil fieri manifestum est; omnia quando
 paulatim crescunt, ut par est, semine certo

 crescentesque genus servant; ut noscere possis 190
 quicque sua de materia grandescere alique.
 huc accedit uti sine certis imbribus anni
 laetificos nequeat fetus submittere tellus
 nec porro secreta cibo natura animantum
 propagare genus possit vitamque tueri; 195
 ut potius multis communia corpora rebus
 multa putes esse, ut verbis elementa videmus,
 quam sine principiis ullam rem existere posse.
 denique cur homines tantos natura parare
 non potuit, pedibus qui pontum per vada possent 200

light? But if they came from nothing, they would rise up suddenly at uncertain periods and unsuitable times of year, inasmuch as there would be no first-beginnings which might be kept from a begetting union by the unpropitious season. No nor would time be required for the growth of things after the meeting of the seed, if they could increase out of nothing. Little babies would at once grow into men and trees in a moment would rise and start out of the ground. But none of these events it is plain ever comes to pass, since all things grow step by step, as is natural, [since they all grow] from a fixed seed and in growing preserve their kind; so that you may be sure that all things increase in size and are fed out of their own matter. Furthermore without fixed seasons of rain the earth is unable to put forth its gladdening produce, nor again if kept from food could the nature of living things continue its kind and sustain life; so that you might hold with greater truth that many bodies are common to many things, as we see letters common to different words, than that any thing could come into being without first-beginnings. Again why could not nature have produced men of such a size and strength as to be able to wade on foot across the sea

transire et magnos manibus divellere montis
 multaque vivendo vitalia vincere saecula,
 si non, materies quia rebus reddita certast
 gignundis e qua constat quid possit oriri?
 nil igitur fieri de nilo posse fatendumst, 205
 semine quando opus est rebus quo quaeque creatae
 aeris in teneras possint proferrier auras.
 postremo quoniam incultis praestare videmus
 culta loca et manibus melioris reddere fetus,
 esse videlicet in terris primordia rerum 210
 quae nos fecundas vertentes vomere glebas
 terraique solum subigentes cimus ad ortus.
 quod si nulla forent, nostro sine quaeque labore
 sponte sua multo fieri meliora videres.
 Huc accedit uti quicque in sua corpora rursum 215
 dissoluat natura neque ad nilum interemat res.
 nam siquid mortale e cunctis partibus esset,
 ex oculis res quaeque repente erepta periret.
 nulla vi foret usus enim quae partibus eius
 discidium parere et nexus exsolvere posset. 220
 quod nunc, aeterno quia constant semine quaeque,
 donec vis obiit quae res diverberet ictu
 aut intus penetret per inania dissoluatque,

and rend great mountains with their hands and outlive many generations of living men, if not because an unchanging matter has been assigned for begetting things and what can arise out of this matter is fixed? We must admit, therefore that nothing can come from nothing, since things require seed before they can severally be born and be brought out into the buxom fields of air. Lastly since we see that tilled grounds surpass untilled and yield a better produce by the labour of hands, we may infer that there are in the earth first-beginnings of things which we by turning up the fruitful clods with the share and labouring the soil of the earth stimulate to rise. But if there were no such, you would see all things without any labour of ours spontaneously come forth in much greater perfection.

Moreover nature dissolves every thing back into its first bodies and does not annihilate things. For if aught were mortal in all its parts alike, the thing in a moment would be snatched away to destruction from before our eyes; since no force would be needed to produce disruption among its parts and undo their fastenings. Whereas in fact, as all things consist of an imperishable seed, nature suffers the destruction of nothing to be seen, until a force has encountered it sufficient

nullius exitium patitur natura videri.
 praeterea quaecumque vetustate amovet aetas, 225
 si penitus peremit consumens materiem omnem,
 unde animale genus generatim in lumina vitae
 reducit Venus, aut reductum daedala tellus
 unde alit atque auget generatim pabula praebens?
 unde mare, ingenuei fontes externaque large 230
 flumina suppeditant? unde aether sidera pascit?
 omnia enim debet, mortali corpore quae sunt,
 infinita aetas consumpse anteacta diesque.
 quod si in eo spatio atque anteacta aetate fuere
 e quibus haec rerum consistit summa refecta, 235
 immortalis sunt natura praedita certe,
 haut igitur possunt ad nilum quaeque reverti,
 denique res omnis eadem vis causaque volgo
 conficeret, nisi materies aeterna teneret,
 inter se nexus minus aut magis indupedita; 240
 tactus enim leti satis esset causa profecto,
 quippe, ubi nulla forent aeterno corpore, quorum
 contextum vis deberet dissolvere quaeque.
 at nunc, inter se quia nexus principiorum
 dissimiles constant aeternaque materies est, 245

to dash things to pieces by a blow or to pierce through the void places within them and break them up. 2 Again if time, whenever it makes away with things through age, utterly destroys them eating up all their matter, out of what does Venus bring back into the light of life the race of living things each after its kind, or, when they are brought back, out of what does earth manifold in works give them nourishment and increase, furnishing them with food each after its kind? The sea, its native fountains and extraneous rivers, out of what are they supplied? Out of what does ether feed the stars? For infinite time gone by and lapse of days must have eaten up all things which are of mortal body. Now if in that period of time gone by those things have existed, of which this sum of things is composed and recruited, they are possessed no doubt of an imperishable body, and cannot therefore any of them return to nothing. 3 Again the same force and cause would destroy all things without distinction, unless everlasting matter held them together, matter more or less closely linked in mutual entanglement: a touch in sooth would be sufficient cause of death, inasmuch as any amount of force must of course undo the texture of things in which no parts at all were of an everlasting body. But in fact, because the fastenings of first-beginnings one with the other are unlike and matter is everlasting,

incolumi remanent res corpore, dum satis acris
 vis obeat pro textura cuiusque reperta.
 haud igitur redit ad nilum res ulla, sed omnes
 discidio redeunt in corpora materiali.
 postremo pereunt imbres, ubi eos pater aether 250
 in gremium matris terrai praecipitavit;
 at nitidae surgunt fruges ramique virescunt
 arboribus, crescunt ipsae fetuque gravantur;
 hinc alitur porro nostrum genus atque ferarum,
 hinc laetas urbes pueris florere videmus 255
 frondiferasque novis avibus canere undique silvas;
 hinc fessae pecudes pingui per pabula laeta
 corpora deponunt et candens lacteus umor
 uberibus manat distentis; hinc nova proles
 artubus infirmis teneras lasciva per herbas 260
 ludit lacte mero mentes percussa novellas.
 haud igitur penitus pereunt quaecumque videntur,
 quando alid ex alio reficit natura nec ullam
 rem gigni patitur nisi morte adiuta aliena.
 Nunc age, res quoniam docui non posse creari 265
 de nilo neque item genitas ad nil revocari,
 nequa forte tamen coepites diffidere dictis,

things continue with body uninjured, until a force is found to encounter them sufficiently strong to overpower the texture of each. A thing therefore never returns to nothing, but all things after disruption go back into the first bodies of matter. Lastly rains die, when father ether has tumbled them into the lap of mother earth; but then goodly crops spring up and boughs are green with leaves upon the trees, trees themselves grow and are laden with fruit; by them in turn our race and the race of wild-beasts are fed, by them we see glad towns teem with children and the leafy forests ring on all sides with the song of new birds; through them cattle wearied with their load of fat lay their bodies down about the glad pastures and the white milky stream pours from the distended udders; through them a new brood with weakly limbs frisks and gambols over the soft grass, their young minds smitten with the love of new milk. None of the things therefore which seem to be lost is utterly lost, since nature replenishes one thing out of another and does not suffer any thing to be begotten, before she has been recruited by the death of some other.

Now mark me: since I have taught that things cannot be born from nothing, cannot when begotten be brought back to nothing, that you may not haply yet begin in any shape to mistrust my words, because

quod nequeunt oculis rerum primordia cerni,
 accipe praeterea quæ corpora tute necessest
 confiteare esse in rebus nec posse videri. 270
 principio venti vis verberat incita portus
 ingentisque ruit navis et nubila differt,
 interdum rapido percurrens turbine campos
 arboribus magnis sternit montisque supremos
 silvifragis vexat flabris: ita perfurit acri 275
 cum fremitu saevitque minaci murmure ventus.
 sunt igitur venti nimirum corpora caeca
 quæ mare, quæ terras, quæ denique nubila caeli
 verrunt ac subito vexantia turbine raptant,
 nec ratione fluunt alia stragemque propagant 280
 et cum mollis aquae fertur natura repente
 flumine abundanti, quam largis imbribus auget
 montibus ex altis magnus decursus aquai
 fragmina coniciens silvarum arbustaque tota,
 nec validi possunt pontes venientis aquai 285
 vim subitam tolerare: ita magno turbidus imbri
 molibus incurrit validis cum viribus amnis.
 dat sonitu magno stragem volvitque sub undis
 grandia saxa ruitque aqua quidquid fluctibus obstat.
 sic igitur debent venti quoque flamina ferri, 290

the first-beginnings of things cannot be seen by the eyes, take more-
 over this list of bodies which you must yourself admit are in the number
 of things and cannot be seen. First of all the force of the wind when
 aroused beats on the harbours and whelms huge ships and scatters
 clouds; sometimes in swift whirling eddy it scours the plains and
 straws them with large trees and scourges the mountain summits with
 forest-rending blasts: so fiercely does the wind rave with a shrill howling
 and rage with threatening roar. Winds therefore sure enough are un-
 seen bodies which sweep the seas, the lands, ay and the clouds of heaven,
 tormenting them and catching them up in sudden whirls. On they
 stream and spread destruction abroad in just the same way as the soft
 liquid nature of water when all at once it is borne along in an over-
 flowing stream, and a great downfall of water from the high hills aug-
 ments it with copious rains, flinging together fragments of forests and
 entire trees; nor can the strong bridges sustain the sudden force of
 coming water: in such wise turbid with much rain the river dashes
 upon the piers with mighty strength. With a loud noise the water
 makes havoc and rolls under its eddies huge stones and throws down
 whatever opposes its waves. In this way then must the blasts of wind

quae veluti validum cum flumen procubuere
 quamlibet in partem, trudunt res ante ruuntque
 impetibus crebris, interdum vertice torto
 corripunt rapideque rotanti turbine portant.
 quare etiam atque etiam sunt venti corpora caeca, 295
 quandoquidem factis et moribus aemula magnis
 amnibus inveniuntur, aperto corpore qui sunt.
 tum porro varios rerum sentimus odores
 nec tamen ad naris venientis cernimus umquam,
 nec calidos aestus tuimur nec frigora quimus 300
 usurpare oculis nec voces cernere suemus;
 quae tamen omnia corporea constare necessest
 natura, quoniam sensus impellere possunt.
 tangere enim et tangi, nisi corpus, nulla potest res.
 denique fluctifrago suspensae in litore vestes 305
 uvescunt, eadem dispansae in sole serescunt.
 at neque quo pacto persederit umor aquai
 visumst nec rursum quo pacto fugerit aestu.
 in parvas igitur partis dispergitur umor
 quas oculi nulla possunt ratione videre. 310
 quin etiam multis solis redeuntibus annis
 anulus in digito subter tenuatur habendo,
 stilicidi casus lapidem cavat, uncus aratri

move on, and when they like a mighty stream have borne down in any direction, they push things before them and throw them down with repeated assaults, sometimes catch them up in curling eddy and carry them away in swift-circling whirl. Wherefore once and again I say winds are unseen bodies, since in their works and ways they are found to rival great rivers which are of a visible body. Then again we perceive the different smells of things, yet never see them coming to our nostrils; nor do we behold heats nor can we observe cold with the eyes nor are we used to see voices. Yet all these things must consist of a bodily nature, since they are able to affect the senses; for nothing but body can touch and be touched. Again clothes hung up on a shore which waves break upon become moist, and then get dry if spread out in the sun. Yet it has not been seen in what way the moisture of water has sunk into them nor again in what way this has been dispelled by heat. The moisture therefore is dispersed into small particles which the eyes are quite unable to see. Again after the revolution of many years a ring on the finger is thinned on the under side by wearing, the dripping from the eaves hollows a stone, the bent ploughshare of

ferreus occulte decrescit vomer in arvis,
 strataque iam volgi pedibus detrita viarum 315
 saxea conspiciamus; tum portas propter aena
 signa manus dextras ostendunt adtenuari
 saepe salutantum tactu praeterque meantum.
 haec igitur minui, cum sint detrita, videmus.
 sed quae corpora decedant in tempore quoque, 320
 invida praecluserit spatium natura videndi.
 postremo quaecumque dies natura rebus
 paulatim tribuit, moderatim crescere cogens,
 nulla potest oculorum acies contenta tueri;
 nec porro quaecumque aevo macieque senescunt, 325
 nec, mare quae inpendent, vesco sale saxa peresa
 quid quoque amittant in tempore cernere possis.
 corporibus caecis igitur natura gerit res.

Nec tamen undique corporea stipata tenentur
 omnia natura; namque est in rebus inane. 330
 quod tibi cognosse in multis erit utile rebus
 nec sinet errantem dubitare et quaerere semper
 de summa rerum et nostris diffidere dictis.
 QUA PROPTER LOCUS EST INTACTUS INANE VACANSQUE
 quod si non esset, nulla ratione moveri 335
 res possent; namque officium quod corporis exstat,
 officere atque obstare, id in omni tempore adesset

iron imperceptibly decreases in the fields, and we behold the stone-paved streets worn down by the feet of the multitude; the brass statues too at the gates shew their right hands to be wasted by the touch of the numerous passers by who greet them. These things then we see are lessened, after they are thus worn down; but what bodies depart at any given time nature has jealously shut out the means of seeing. Lastly the bodies which time and nature add to things by little and little, constraining them to grow in due measure, no exertion of the eyesight can behold; and so too wherever things grow old by age and decay, and when rocks hanging over the sea are eaten away by the fine salt spray, you cannot see what they lose at any given moment. Nature therefore works by unseen bodies.

And yet all things are not on all sides jammed together and kept in by body: there is also void in things. To have learned this will be good for you on many accounts; it will not suffer you to wander in doubt and be to seek in the sum of things and (distrustful of our words.) If there were not void, things could not move at all; for that which is the property of body, to let and hinder, would be present to all things at

omnibus; haud igitur quicquam procedere posset,
 principium quoniam cedendi nulla daret res.
 at nunc per maria ac terras sublimaque caeli 340
 multa modis multis varia ratione moveri
 cernimus ante oculos, quae, si non esset inane,
 non tam sollicito motu privata carerent
 quam genita omnino nulla ratione fuissent,
 undique materies quoniam stipata quiesset. 345
 praeterea quamvis solidae res esse putentur,
 hinc tamen esse licet raro cum corpore cernas.
 in saxis ac speluncis permanat aquarum
 liquidus umor et uberibus flent omnia guttis.
 dissipat in corpus sese cibus omne animantum. 350
 crescunt arbusta et fetus in tempore fundunt,
 quod cibus in totas usque ab radicibus imis
 per truncos ac per ramos diffunditur omnis.
 inter saepta meant voces et clausa domorum
 transvolitant, rigidum permanat frigus ad ossa. 355
 quod nisi inania sint, qua possint corpora quaeque
 transire? haud ulla fieri ratione videres.
 denique cur alias aliis praestare videmus
 pondere res rebus nilo maiore figura?
 nam si tantundemst in lanae glomere quantum 360
 corporis in plumbo est, tantundem pendere par est,

all times; nothing therefore could go on, since no other thing would be the first to give way. But in fact throughout seas and lands and the heights of heaven we see before our eyes many things move in many ways for various reasons, which things, if there were no void, I need not say would lack and want restless motion: they never would have been begotten at all, since matter jammed on all sides would have been at rest. Again however solid things are thought to be, you may yet learn from this that they are of rare body: in rocks and caverns the moisture of water oozes through and all things weep with abundant drops. Food distributes itself through the whole body of living things; trees grow and yield fruit in season because food is diffused through the whole from the very roots over the stem and all the boughs. Voices pass through walls and fly through houses shut, stiffening frost pierces to the bones. Now if there are no void parts, by what way can the bodies severally pass? You would see it to be quite impossible. Once more, why do we see one thing surpass another in weight though not larger in size? For if there is just as much body in a ball of wool as there is in a lump of lead, it is natural it should weigh the same, since the property of body

corporis officiumst quoniam premere omnia deorsum,
 contra autem natura manet sine pondere inanis.
 ergo quod magnumst aequè leviusque videtur,
 nimirum plus esse sibi declarat inanis; 365
 at contra gravius plus in se corporis esse
 dedicat et multo vacui minus intus habere.
 est igitur nimirum id quod ratione sagaci
 quaerimus, admixtum rebus, quod inane vocamus.

Illud in his rebus ne te deducere vero 370
 possit, quod quidam fingunt, praecurrere cogor.
 cedere squamigeris latices nitentibus aiunt
 et liquidas aperire vias, quia post loca pisces
 linquant, quo possint cedentes confluere undae;
 sic alias quoque res inter se posse moveri 375
 et mutare locum, quamvis sint omnia plena.
 scilicet id falsa totum ratione receptumst.
 nam quo squamigeri poterunt procedere tandem,
 ni spatium dederint latices? concedere porro
 quo poterunt undae, cum pisces ire nequibunt? 380
 aut igitur motu privandumst corpora quaeque
 aut esse admixtum dicundumst rebus inane
 unde initum primum capiat res quaeque movendi.
 postremo duo de concursu corpora lata

is to weigh all things downwards, while on the contrary the nature of void is ever without weight. Therefore when a thing is just as large, yet is found to be lighter, it proves sure enough that it has more of void in it; while on the other hand that which is heavier shews that there is in it more of body and that it contains within it much less of void. Therefore that which we are seeking with keen-sighted reason exists sure enough, mixed up in things; and we call it void.

And herein I am obliged to forestall this point which some raise, lest it draw you away from the truth. The waters they say make way for the scaly creatures as they press on, and open liquid paths, because the fish leave room behind them, into which the yielding waters may stream; thus other things too may move and change place among themselves, although the whole sum be full. This you are to know has been taken up wholly on false grounds. For on what side I ask can the scaly creatures move forwards, unless the waters have first made room? again on what side can the waters give place, so long as the fish are unable to go on? Therefore you must either strip all bodies of motion or admit that in things void is mixed up from which every thing gets its first start in moving. Lastly if two broad bodies after contact quickly

si cita dissiliant, nempe aer omne necessest, 385
 inter corpora quod fiat, possidat inane.
 is porro quamvis circum celerantibus auris
 confluat, haud poterit tamen uno tempore totum
 compleri spatium; nam primum quemque necessest
 occupet ille locum, deinde omnia possideantur. 390
 quod si forte aliquis, cum corpora dissiluire,
 tum putat id fieri quia se condenseat aer,
 errat; nam vacuum tum fit quod non fuit ante
 et repletur item vacuum quod constitit ante,
 nec tali ratione potest denserier aer, 395
 nec, si iam posset, sine inani posset, opinor,
 ipse in se trahere et partis conducere in unum.

Quapropter, quamvis causando multa moreris,
 esse in rebus inane tamen fateare necessest.
 multaque praeterea tibi possum commemorando 400
 argumenta fidem dictis conradere nostris.
 verum animo satis haec vestigia parva sagaci
 sunt per quae possis cognoscere cetera tute.
 namque canes ut montivagae persaepe ferai
 naribus inveniunt intectas fronde quietes, 405
 cum semel institerunt vestigia certa viai,
 sic alid ex alio per te tute ipse videre

spring asunder, the air must surely fill all the void which is formed between the bodies. Well however rapidly it stream together with swift-circling currents, yet the whole space will not be able to be filled up in one moment; for it must occupy first one spot and then another, until the whole is taken up. But if haply anyone supposes that, when the bodies have started asunder, that result follows because the air condenses, he is mistaken; for a void is then formed which was not before, and a void also is filled which existed before; nor can the air condense in such a way, nor supposing it could, could it methinks without void draw into itself and bring its parts together.

Wherefore however long you hold out by urging many objections, you must needs in the end admit that there is a void in things. And many more arguments I may state to you in order to accumulate proof on my words; but these slight footprints are enough for a keen-searching mind to enable you by yourself to find out all the rest. For as dogs often discover by smell the lair of a mountain-ranging wild beast though covered over with leaves, when once they have got on the sure tracks, thus you in cases like this will be able by yourself alone to see one thing

talibus in rebus poteris caecasque latebras
 insinuare omnis et verum protrahere inde.
 quod si pigraris paulumve recesseris ab re, 410
 hoc tibi de plano possum promittere, Memmi:
 usque adeo largos haustus e fontibu' magnis
 lingua meo suavis diti de pectore fundet,
 ut verear ne tarda prius per membra senectus
 serpat et in nobis vitae claustra resolvat, 415
 quam tibi de quavis una re versibus omnis
 argumentorum sit copia missa per auris.

Sed nunc ut repetam coeptum pertexere dictis,
 omnis ut est igitur per se natura duabus
 constitit in rebus; nam corpora sunt et inane, 420
 haec in quo sita sunt et qua diversa moventur.
 corpus enim per se communis dedicât esse
 sensus; cui nisi prima fides fundata valebit,
 haut erit occultis de rebus quo referentes
 confirmare animi quicquam ratione queamus. 425
 tum porro locus ac spatium, quod inane vocamus,
 si nullum foret, haut usquam sita corpora possent
 esse neque omnino quoquam diversa meare;
 id quod iam supera tibi paulo ostendimus ante.
 praeterea nil est quod possis dicere ab omni 430
 corpore seiunctum secretumque esse ab inani,

after another and find your way into all dark corners and draw forth the truth. But if you lag or swerve a jot from the reality, this I can promise you, o Memmius, at once without more ado: such plenteous draughts from abundant wellsprings my sweet tongue shall pour from my richly furnished breast, that I fear slow age will steal over our limbs and break open in us the fastnesses of life, ere the whole store of reasons on any one question has by my verses been dropped into your ears.

But now to resume the thread of the design which I am weaving in verse: all nature then, as it exists by itself, has been founded on two things: there are bodies and there is void in which these bodies are placed and through which they move about. For that body exists by itself the general feeling of mankind declares; and unless the first foundation of belief shall be firmly grounded on this, there will be nothing to which we can appeal in order to prove anything by reasoning of mind. Then again, if room and space which we call void did not exist, bodies could not be placed anywhere nor move about at all; as we have demonstrated to you a little before. Moreover there is nothing which you can affirm to be at once separate from all body and quite distinct

quod quasi tertia sit numero natura reperta.
 nam quodcumque erit, esse aliquid debebit id ipsum;
 435 cui si tactus erit quamvis levis exiguusque,
 434 augmine vel grandi vel parvo denique, dum sit, 435
 corporis augebit numerum summamque sequetur.
 sin intactile erit, nulla de parte quod ullam
 rem prohibere queat per se transire meantem,
 scilicet hoc id erit, vacuum quod inane vocamus.
 praeterea per se quodcumque erit, aut faciet quid 440
 aut aliis fungi debebit agentibus ipsum
 aut erit ut possint in eo res esse gerique.
 at facere et fungi sine corpore nulla potest res
 nec praebere locum porro nisi inane vacansque.
 ergo praeter inane et corpora tertia per se 445
 nulla potest rerum in numero natura relinqui,
 nec quae sub sensus cadat ullo tempore nostros
 nec ratione animi quam quisquam possit apisci.
 Nam quaecumque cluent, aut his coniuncta duabus
 rebus ea invenies aut horum eventa videbis. 450
coniunctum est id quod nusquam sine permiciali
 discidio potis est seiungi seque gregari,
 pondus uti saxist, calor ignis, liquor aquai.

from void, which would so to say count as the discovery of a third nature. For whatever shall exist, this of itself must be something or other. Now if it shall admit of touch in however slight and small a measure, it will, be it with a large or be it with a little addition, provided it do exist, increase the amount of body and join the sum. But if it shall be intangible and unable to hinder any thing from passing through it on any side, this you are to know will be that which we call empty void. Again whatever shall exist by itself, will either do something or will itself suffer by the action of other things, or else in it things will be able to exist and go on. But no thing can do and suffer without body nor aught furnish room except void and vacancy. Therefore beside void and bodies no third nature taken by itself can be left in the number of things, either such as to fall at any time under the ken of our senses or such as any one can grasp by the reason of his mind.

For whatever things are named, you will either find to be properties linked to these two things or you will see to be accidents of these things. That is a property which can in no case be disjoined and separated without destruction accompanying the severance, such as the weight of a stone, the heat of fire, the fluidity of water. Slavery

TACTUS CORPORIBUS CUNCTIS INTACTUS INANI
 servitium contra paupertas divitiaeque, 455
 libertas bellum concordia, cetera quorum
 adventu manet incolumis natura abituque,
 haec soliti sumus, ut par est, eventa vocare.
 tempus item per se non est, sed rebus ab ipsis
 consequitur sensus, transactum quid sit in aevo, 460
 tum quae res instet, quid porro deinde sequatur.
 nec per se quemquam tempus sentire fatendumst
 semotum ab rerum motu placidaque quiete.
 denique Tyndaridem raptam belloque subactas
 Troiiugenae gentis cum dicunt esse, videndumst 465
 ne forte haec per se cogant nos esse fateri,
 quando ea saecula hominum, quorum haec eventa fuerunt,
 inrevocabilis abstulerit iam praeterita aetas;
 namque aliut Teucris, aliut regionibus ipsis
 eventum dici poterit quodcumque erit actum. 470
 denique materies si rerum nulla fuisset
 nec locus ac spatium, res in quo quaeque geruntur,
 numquam Tyndaridis formae conflatus amore
 ignis, Alexandri Phrygio sub pectore gliscens,
 clara accendisset saevi certamina belli, 475
 nec clam durateus Troiianis Pergama partu

on the other hand, poverty and riches, liberty war concord and all other things which may come and go while the nature of the thing remains unharmed, these we are wont, as it is right we should, to call accidents. Time also exists not by itself, but simply from the things which happen the sense apprehends what has been done in time past, as well as what is present and what is to follow after. And we must admit that no one feels time by itself abstracted from the motion and calm rest of things. So when they say that the daughter of Tyndarus was ravished and the Trojan nations were subdued in war, we must mind that they do not force us to admit that these things are by themselves, since those generations of men, of whom these things were accidents, time now gone by has irrevocably swept away. For whatever shall have been done may be termed an accident in one case of the Teucran people, in another of the countries simply. Yes for if there had been no matter of things and no room and space in which things severally go on, never had the fire, kindled by love of the beauty of Tyndarus' daughter, blazed beneath the Phrygian breast of Alexander and lighted up the famous struggles of cruel war, nor had the timber-horse unknown to the Trojans wrapt

inflammasset equos nocturno Graiiugenarum;
 perspicere ut possis res gestas funditus omnis
 non ita uti corpus per se constare neque esse,
 nec ratione cluere eadem qua constet inane, 480
 sed magis ut merito possis eventa vocare
 corporis atque loci, res in quo quaeque gerantur.

Corpora sunt porro partim primordia rerum,
 partim concilio quae constant principiorum.
 sed quae sunt rerum primordia, nulla potest vis 485
 stinguere; nam solido vincunt ea corpore demum.
 etsi difficile esse videtur credere quicquam
 in rebus solido reperiri corpore posse.
 transit enim fulmen caeli per saepta domorum,
 clamor ut ac voces; ferrum candescit in igni 490
 dissiliuntque fero ferventia saxa vapore;
 tum labefactatus rigor auri solvitur aestu;
 tum glacies aeris flammā devicta liquescit;
 permanat calor argentum penetrabileque frigus,
 quando utrumque manu retinentes pocula rite 495
 sensimus infuso lympharum rore superne.
 usque adeo in rebus solidi nil esse videtur.
 sed quia vera tamen ratio naturaue rerum

Pergama in flames by its night-issuing brood of sons of the Greeks; so that you may clearly perceive that all actions from first to last exist not by themselves and are not by themselves in the way that body is, nor are terms of the same kind as void is, but are rather of such a kind that you may fairly call them accidents of body and of the room in which they severally go on.

Bodies again are partly first-beginnings of things, partly those which are formed of a union of first-beginnings. But those which are first-beginnings of things no force can quench: they are sure to have the better by their solid body. Although it seems difficult to believe that aught can be found among things with a solid body. For the lightning of heaven passes through the walls of houses, as well as noise and voices; iron grows red-hot in the fire and rocks burning with fierce heat burst asunder; the hardness of gold is broken up and dissolved by heat; the ice of brass melts vanquished by the flame; warmth and piercing cold ooze through silver, since we have felt both as we held cups with the hand in due fashion and the water was poured down into them. So universally there is found to be nothing solid in things. But yet because true reason and the nature of things constrains, attend until we

cogit, ades, paucis dum versibus expediamus
 esse ea quae solido atque aeterno corpore constant, 500
 semina quae rerum primordiaque esse docemus,
 unde omnis rerum nunc constet summa creata.

Principio quoniam duplex natura duarum
 dissimilis rerum longe constare repertast,
 corporis atque loci, res in quo quaeque geruntur, 505
 esse utramque sibi per se puramque necessest.
 nam quacumque vacat spatium, quod inane vocamus,
 corpus ea non est; qua porro cumque tenet se
 corpus, ea vacuum nequaquam constat inane.
 sunt igitur solida ac sine inani corpora prima. 510
 praeterea quoniam genitis in rebus inanest,
 materiem circum solidam constare necessest,
 nec res ulla potest vera ratione probari
 corpore inane suo celare atque intus habere,
 si non, quod cohibet, solidum constare relinquas. 515
 id porro nil esse potest nisi materiai
 concilium, quod inane queat rerum cohibere.
 materies igitur, solido quae corpore constat,
 esse aeterna potest, cum cetera dissoluantur.
 tum porro si nil esset quod inane vocaret, 520
 omne foret solidum; nisi contra corpora certa
 essent quae loca complerent quaecumque tenerent,

make clear in a few verses that there are such things as consist of solid and everlasting body, which we teach are seeds of things and first-beginnings, out of which the whole sum of things which now exists has been produced.

1 First of all then since there has been found to exist a twofold and widely dissimilar nature of two things, that is to say of body and of place in which things severally go on, each of the two must exist for and by itself and quite unmixed. For where there is empty space which we call void, there body is not; wherever again body maintains itself, there empty void no wise exists. First bodies therefore are solid and without void. 2 Again since there is void in things begotten, solid matter must exist about this void, and no thing can be proved by true reason to conceal in its body and have within it void, unless you choose to allow that that which holds it in is solid. Again that can be nothing but a union of matter which can keep in the void of things. Matter therefore, which consists of a solid body, may be everlasting, though all things else are dissolved. 3 Moreover if there were no empty void, the universe would be solid; unless on the other hand there were

omne quod est, spatium vacuum constaret inane.
 alternis igitur nimirum corpus inani
 distinctumst, quoniam nec plenum naviter extat 525
 nec porro vacuum. sunt ergo corpora certa
 quae spatium pleno possint distinguere inane.
 haec neque dissolui plagis extrinsecus icta
 possunt nec porro penitus penetrata retexi
 nec ratione queunt alia temptata labare; 530
 id quod iam supra tibi paulo ostendimus ante.
 nam neque conlidi sine inani posse videtur
 quicquam nec frangi nec findi in bina secando
 nec capere umorem neque item manabile frigus
 nec penetralem ignem, quibus omnia conficiuntur. 535
 et quo quaeque magis cohibet res intus inane,
 tam magis his rebus penitus temptata labascit.
 ergo si solida ac sine inani corpora prima
 sunt ita uti docui, sint haec aeterna necessest.
 praeterea nisi materies aeterna fuisset, 540
 antehac ad nilum penitus res quaeque redissent
 de niloque renata forent quaecumque videmus.
 at quoniam supra docui nil posse creari
 de nilo neque quod genitum est ad nil revocari,
 esse inmortali primordia corpore debent, 545

certain bodies to fill up whatever places they occupied, the existing universe would be empty and void space. Therefore sure enough body and void are marked off in alternate layers, since there exists neither a perfect fulness nor a perfect void. There are therefore certain bodies capable of marking off void space from full. These can neither be broken in pieces by the stroke of blows from without nor have their texture undone by aught piercing to their core nor give way before any other kind of assault; as we have proved to you a little before. For without void nothing seems to admit of being crushed in or broken up or split in two by cutting, or of taking in wet or permeating cold or penetrating fire, by which all things are destroyed. And the more anything contains within it of void, the more thoroughly it gives way to the assault of these things. Therefore if first bodies are as I have shewn solid and without void, they must be everlasting. Again unless matter had been eternal, all things before this would have utterly returned to nothing and whatever things we see would have been born anew from nothing. But since I have proved above that nothing can be produced from nothing, and that what is begotten cannot be recalled to nothing, first-beginnings must be of an imperishable body, into which

dissolui quo quaeque supremo tempore possint,
 materies ut subpeditet rebus reparandis.
 sunt igitur solida primordia simplicitate
 nec ratione queunt alia servata per aevom
 ex infinito iam tempore res reparare. 550

Denique si nullam finem natura parasset
 frangendis rebus, iam corpora materiai
 usque redacta forent aevo frangente priore,
 ut nil ex illis a certo tempore posset
 conceptum summum aetatis pervadere *ad auctum*. 555 x
 nam quidvis citius dissolvi posse videmus
 quam rursus refici; quapropter longa diei
 infinita aetas anteacti temporis omnis
 quod fregisset adhuc disturbans dissoluensque,
 numquam relicuo reparari tempore posset. 560
 at nunc nimirum frangendi reddita finis
 certa manet, quoniam refici rem quamque videmus
 et finita simul generatim tempora rebus
 stare, quibus possint aevi contingere florem.
 huc accedit uti, solidissima materiai 565
 corpora cum constant, possit tamen, omnia, reddi,
 mollia quae fiunt, aer aqua terra vapores,
 quo pacto fiant et qua vi quaeque gerantur,

all things can be dissolved at their last hour, that there may be a supply of matter for the reproduction of things. Therefore first-beginnings are of solid singleness, and in no other way can they have been preserved through ages during infinite time past in order to reproduce things.

Again if nature had set no limit to the breaking of things, by this time the bodies of matter would have been so far reduced by the breaking of past ages that nothing could within a fixed time be conceived out of them and reach its utmost growth of being. For we see that anything is more quickly destroyed than again renewed; and therefore that which the long, the infinite duration of all bygone time had broken up demolished and destroyed, could never be reproduced in all remaining time. But now sure enough a fixed limit to their breaking has been set, since we see each thing renewed, and at the same time definite periods fixed for things to reach the flower of their age. Moreover while the bodies of matter are most solid, it may yet be explained in what way all things which are formed soft, as air water earth fires, are so formed and by what force they severally go on, since once for all

admixtum quoniam semel est in rebus inane.
 at contra si mollia sint primordia rerum, 570
 unde queant validi silices ferrumque creari
 non poterit ratio reddi; nam funditus omnis
 principio fundamenti natura carebit.
 sunt igitur solida pollentia simplicitate
 quorum condenseo magis omnia conciliatu 575
 artari possunt validasque ostendere viris.
 Porro si nullast frangendis reddita finis
 corporibus, tamen ex aeterno tempore quaeque
 nunc etiam superare necessest corpora rebus,
 quae nondum clueant ullo temptata periclo. 580
 at quoniam fragili natura praedita constant,
 discrepat aeternum tempus potuisse manere
 innumerabilibus plagis vexata per aevom.
 denique iam quoniam generatim reddita finis
 crescendi rebus constat vitamque tenendi, 585
 et quid quaeque queant per foedera naturai,
 quid porro nequeant, sancitum quandoquidem extat,
 nec commutatur quicquam, quin omnia constant
 usque adeo, variae volucres ut in ordine cunctae
 ostendant maculas generalis corpore inesse, 590
 inmutabili' materiae quoque corpus habere
 debent nimirum. nam si primordia rerum

there is void mixed up in things. But on the other hand if the first beginnings of things be soft, it cannot be explained out of what enduring basalt and iron can be produced; for their whole nature will utterly lack a first foundation to begin with. First-beginnings therefore are strong in solid singleness, and by a denser combination of these all things can be closely packed and exhibit enduring strength.

Again if no limit has been set to the breaking of bodies, nevertheless the several bodies which go to things must survive from eternity up to the present time, not yet assailed by any danger. But since they are possessed of a frail nature, it is not consistent with this that they could have continued through eternity harassed through ages by countless blows. Again too since a limit of growing and sustaining life has been assigned to things each after its kind, and since by the laws of nature it stands decreed what they can each do and what they cannot do, and since nothing is changed, but all things are so constant that the different birds all in succession exhibit in their body the distinctive marks of their kind, they must sure enough have a body of unchangeable matter also. For if the first-beginnings of things could in any way be van-

commutari aliqua possint ratione revicta,
 incertum quoque iam constet quid possit oriri,
 quid nequeat, finita potestas denique cuique 595
 quanam sit ratione atque alte terminus haerens,
 nec totiens possint generatim saecula referre
 naturam mores victum motusque parentum.

Tum porro quoniam est extremum quodque cacumen
 corporis illius quod nostri cernere sensus 600
 iam nequeunt, id nimirum sine partibus extat
 et minima constat natura nec fuit umquam
 per se secretum neque posthac esse valebit,
 alterius quoniamst ipsum pars; primumque et una
 inde aliae atque aliae similes ex ordine partes 605
 agmine condenso naturam corporis explent,
 quae quoniam per se nequeunt constare, necessest
 haerere unde queant nulla ratione revelli.
 sunt igitur solida primordia simplicitate
 quae minimis stipata cohaerent partibus arte, 610
 non ex illarum conventu conciliata,
 sed magis aeterna pollentia simplicitate,
 unde neque avelli quicquam neque deminui iam
 concedit natura reservans semina rebus.
 praeterea nisi erit minimum, parvissima quaeque 615

quished and changed, it would be then uncertain too what could and what could not rise into being, in short on what principle each thing has its powers defined, its deepset boundary mark; nor could the generations reproduce so often each after its kind the nature, habits, way of life and motions of the parents. *extremum cacumen?*

Then again since there is ever a bounding point to that first body which already is beyond what our senses can perceive, that point sure enough is without parts and consists of a least nature and never has existed apart by itself and will not be able in future so to exist, since it is in itself part of that other; and so a first and single part and then other and other similar parts in succession fill up in close serried mass the nature of the first body; and since these cannot exist by themselves, they must cleave to that from which they cannot in any way be torn. First-beginnings therefore are of solid singleness, massed together and cohering closely by means of least parts, not compounded out of a union of those parts, but, rather, strong in everlasting singleness. From them nature allows nothing to be torn, nothing further to be worn away, reserving them as seeds for things. Again unless there shall be a least,

corpora constabunt ex partibus infinitis,
 quippe ubi dimidiaie partis pars semper habebit
 dimidiam partem nec res praefiniet ulla.
 ergo rerum inter summam minimamque quid escit?
 nil erit ut distet; nam quamvis funditus omnis 620
 summa sit infinita, tamen, parvissima quae sunt,
 ex infinitis constabunt partibus aequae.
 quod quoniam ratio reclamatur vera negatque
 credere posse animum, victus fateare necessest
 esse ea quae nullis iam praedita partibus extent 625
 et minima constant natura. quae quoniam sunt,
 illa quoque esse tibi solida atque aeterna fatendum.
 denique si minimas in partis cuncta resolvi
 cogere consuesset rerum natura creatrix,
 iam nil ex illis eadem reparare valeret 630
 propterea quia, quae nullis sunt partibus aucta,
 non possunt ea quae debet genitalis habere
 materies, varios conexus pondera plagas
 concursus motus, per quae res quaeque geruntur.
 Quapropter qui materiem rerum esse putarunt 635
 ignem atque ex igni summam consistere solo,
 magno opere a vera lapsi ratione videntur.
 Heraclitus init quorum dux proelia primus,

the very smallest bodies will consist of infinite parts, inasmuch as the half of the half will always have a half and nothing will set bounds to the division. Therefore between the sum of things and the least of things what difference will there be? There will be no distinction at all; for how absolutely infinite soever the whole sum is, yet the things which are smallest will equally consist of infinite parts. Now since on this head true reason protests and denies that the mind can believe it, you must yield and admit that there exist such things as are possessed of no parts and are of a least nature. And since these exist, those first bodies also you must admit to be solid and everlasting. Once more, if nature creatress of things had been wont to compel all things to be broken up into least parts, then too she would be unable to reproduce anything out of those parts, because those things which are enriched with no parts cannot have the properties which begetting matter ought to have, I mean the various entanglements, weights, blows, clashings, motions, by means of which things severally go on.

For which reasons they who have held fire to be the matter of things and the sum to be formed out of fire alone, are seen to have strayed most widely from true reason. At the head of whom enters Heraclitus

clarus *ob* obscuram linguam magis inter inanis
 quamde gravis inter Graios qui vera requirunt. 640
 omnia enim stolidi magis admirantur amantque,
 inversis quae sub verbis latitantia cernunt,
 veraque constituunt quae belle tangere possunt
 auris et lepidò quae sunt fucata sonore.

Nam cur tam variae res possint esse requiro, 645
 ex uno si sunt igni puroque creatae;
 nil prodesset enim calidum denserier ignem
 nec rareferi, si partes ignis eandem
 naturam quam totus habet super ignis haberent.
 acrior ardor enim conductis partibus esset, 650
 languidior porro disiectis disque supatis:
 amplius hoc fieri nil est quod posse rearis
 talibus in causis, nedum variantia rerum
 tanta queat densis rarisque ex ignibus esse.
 id quoque, si faciant admixtum rebus inane, 655
 denseri poterunt ignes rarique relinqui.
 sed quia multa sibi cernunt contraria nasci
 et fugitant in rebus inane relinquere purum,
 ardua dum metuunt, amittunt vera viai,
 nec rursum cernunt exempto rebus inani 660
 omnia denseri fierique ex omnibus unum

to do battle, famous for obscurity more among the frivolous than the earnest Greeks who seek the truth. For fools admire and like all things the more which they perceive to be concealed under involved language, and determine things to be true which can prettily tickle the ears and are varnished over with finely sounding phrase.

For I want to know how things can be so various, if they are formed out of fire one and unmixed: it would avail nothing for hot fire to be condensed or rarefied, if the parts of fire had always the same nature which the whole fire likewise has. The heat would be more intense by compression of parts, more faint by their severance and dispersion. More than this you cannot think it in the power of such causes to effect, far less could so great a diversity of things come from mere density and rarity of fires. Observe also, if they suppose void to be mixed up in things, fire may then be condensed and left rare; but because they see many things rise up in contradiction to them and shrink from leaving unmixed void in things, fearing the steep, they lose the true road, and do not perceive on the other hand that if void is taken from things, all things are condensed and out of all things is formed one single body,

corpus, nil ab se quod possit mittere raptim;
 aestifer ignis uti lumen iacit atque vaporem,
 ut videas non e stipatis partibus esse.
 quod si forte alia credunt ratione potesse 665
 ignis in coetu stingui mutareque corpus,
 scilicet ex nulla facere id si parte reparcent,
 occidet ad nilum nimirum funditus ardor
 omnis et e nilo fient quaecumque creantur.
 nam quodcumque suis mutatum finibus exit, 670
 continuo hoc mors est illius quod fuit ante.
 proinde aliquit superare necesse est incolume ollis,
 ne tibi res redeant ad nilum funditus omnes
 de niloque renata vigescat copia rerum.
 nunc igitur quoniam certissima corpora quaedam 675
 sunt quae conservant naturam semper eandem,
 quorum habitu aut aditu mutatoque ordine mutant
 naturam res et convertunt corpora sese,
 scire licet non esse haec ignea corpora rerum.
 nil referret enim quaedam decedere abire, 680
 atque alia adtribui, mutarique ordine quaedam,
 si tamen ardoris naturam cuncta tenerent;
 ignis enim foret omnimodis quodcumque crearent.

which cannot briskly radiate anything from it, in the way heat-giving fire emits light and warmth, letting you see that it is not of closely compressed parts. But if they haply think that in some other way fires may be quenched in the union and change their body you are to know that if they shall scruple on no side to do this, all heat sure enough will be utterly brought to nothing, and all things that are produced will be formed out of nothing. For whenever a thing changes and quits its proper limits, at once this change of state is the death of that which was before. Therefore something or other must needs be left to those fires of theirs undestroyed, that you may not have all things absolutely returning to nothing, and the whole store of things born anew and flourishing out of nothing. Since then in fact there are some most unquestionable bodies which always preserve the same nature, on whose going or coming or change of order things change their nature and bodies are transformed, you are to know that these first bodies of things are not of fire. For it would matter nothing that some should withdraw and go away and others should be added on and some should have their order changed, if they yet one and all retained the nature of heat; for whatever they produced would be altogether fire. But thus methinks it is:

verum, ut opinor, itast: sunt quaedam corpora quorum
 concursus motus ordo positura figurae 685
 efficiunt ignis, mutatoque ordine mutant
 naturam neque sunt igni simulata neque ulli
 praeterea rei quae corpora mittere possit
 sensibus et nostros adiectu tangere tactus.

Dicere porro ignem res omnis esse neque ullam 690
 rem veram in numero rerum constare nisi ignem,
 quod facit hic idem, perdelirum esse videtur.
 nam contra sensus ab sensibus ipse repugnat
 et labefactat eos unde omnia credita pendent,
 unde hic cognitus est ipsi quem nominat ignem; 695
 credit enim sensus ignem cognoscere vere,
 cetera non credit, quae nilo clara minus sunt.
 quod mihi cum vanum tum delirum esse videtur;
 quo referemus enim? quid nobis certius ipsis
 sensibus esse potest, qui vera ac falsa notemus? 700
 praeterea quare quisquam magis omnia tollat
 et velit ardoris naturam linquere solam,
 quam neget esse ignis, *quidvis* tamen esse relinquat?
 aequa videtur enim dementia dicere utrumque.

Quapropter qui materiem rerum esse putarunt 705

there are certain bodies whose clashings motions order position shapes produce fires, and which by a change of order change the nature of the things and do not resemble fire nor anything else which has the power of sending bodies to our senses and touching by its contact our sense of touch.

Again to say that all things are fire and that no real thing except fire exists in the number of things, as this same man does, appears to be sheer dotage. For he himself takes his stand on the side of the senses to fight against the senses and shakes their authority, on which rests all our belief, ay from which this fire as he calls it is known to himself; for he believes that the senses can truly perceive fire, he does not believe they can perceive all other things which are not a whit less clear. Now this appears to me to be as false as it is foolish; for to what shall we appeal? what surer test can we have than the senses, whereby to note truth and falsehood? Again why should any one rather abolish all things and choose to leave the single nature of heat, than deny that fires exist, while he allows any thing else to be? it seems to be equal madness to affirm either this or that.

For these reasons they who have held that fire is the matter of

ignem atque ex igni summam consistere posse,
 et qui principium gignundis aera rebus
 constituere, aut umorem quicumque putarunt
 fingere res ipsum per se, terramque creare
 omnia et in rerum naturas vertier omnis, 710
 magno opere a vero longe derrasse videntur.
 adde etiam qui conduplicant primordia rerum
 aera iungentes igni terramque liquori,
 et qui quattuor ex rebus posse omnia rentur
 ex igni terra atque anima procrescere et imbri. 715
 quorum Acragantinus cum primis Empedocles est,
 insula quem triquetris terrarum gessit in oris,
 quam fluitans circum magnis anfractibus aequor
 Ionium glaucis aspargit virus ab undis,
 angustoque fretu rapidum mare dividit undis 720
 Italiae terrarum oras a finibus eius.
 hic est vasta Charybdis et hic Aetnaea minantur
 murmura flammaram rursum se colligere iras,
 faucibus eruptos iterum vis ut vomat ignis
 ad caelumque ferat flammai fulgura rursum. 725
 quae cum magna modis multis miranda videtur
 gentibus humanis regio visendaque fertur,
 rebus opima bonis, multa munita virum vi,

things and that the sum can be formed out of fire, and they who have determined air to be the first-beginning in begetting things, and all who have held that water by itself alone forms things, or that earth produces all things and changes into all the different natures of things, appear to have strayed exceedingly wide of the truth; as well as they who make the first-beginnings of things twofold coupling air with fire and earth with water, and they who believe that all things grow out of four things, fire earth and air and water. Chief of whom is Agrigentine Empedocles: him within the three-cornered shores of its lands that island bore, about which the Ionian sea flows in large cranklings, and splashes up brine from its green waves. Here the sea racing in its straitened frith divides by its water the shores of Italia's lands from the other's coasts; here is wasteful Charybdis and here the rumblings of Ætna threaten anew to gather up such fury of flames, as again with force to belch forth the fires bursting from its throat and carry up to heaven once more the lightnings of flame. Now though this great country is seen to deserve in many ways the wonder of mankind and is held to be well worth visiting, rich in all good things, guarded by large force of

nil tamen hoc habuisse viro praeclarius in se
 nec sanctum magis et mirum carumque videtur. 730
 carmina quin etiam divini pectoris eius
 vociferantur et exponunt praeclara reperta,
 ut vix humana videatur stirpe creatus.

Hic tamen et supra quos diximus inferiores
 partibus egregie multis multoque minores, 735
 quamquam multa bene ac divinitus invenientes
 ex adyto tamquam cordis responsa dedere
 sanctius et multo certa ratione m̄gis quam
 Pythia quae tripodi a Phoebi lauroque profatur,
 principiis tamen in rerum fecere ruinas 740
 et graviter magni magno cecidere ibi casu;
 primum quod motus exempto rebus inani
 constituunt, et res mollis rarasque relinquont,
 aera solem ignem terras animalia frugis,
 nec tamen admiscent in eorum corpus inane; 745
 deinde quod omnino finem non esse secandis
 corporibus faciunt neque pausam stare fragori
 nec prorsum in rebus minimum consistere quicquam;
 cum videamus id extremum cuiusque cacumen
 esse quod ad sensus nostros minimum esse videtur, 750
 conicere ut possis ex hoc, quae cernere non quis

men, yet seems to have held within it nothing more glorious than this man, nothing more holy, marvellous and dear. The verses too of his godlike genius cry with a loud voice and set forth in such wise his glorious discoveries that he hardly seems born of a mortal stock.

Yet he and those whom we have mentioned above immeasurably inferior and far beneath him, although the authors of many excellent and godlike discoveries they have given responses from so to say their hearts' holy of holies with more sanctity and on much more unerring grounds than the Pythia who speaks out from the tripod and laurel of Phœbus, have yet gone to ruin in the first-beginnings of things: it is there they have fallen, and great themselves great and heavy has been that fall; first because they have banished void from things and yet assign to them motions, and allow things soft and rare, air sun fire earth living things corn, and yet mix not up void in their body; next because they suppose that there is no limit to the division of bodies and no stop set to their breaking and that there exists no least at all in things; though we see that that is the bounding point of any thing which seems to be least in reference to our senses, so that from this you may infer that because the things which you do not see have a bounding

extremum quod habent, minimum consistere *in illis*.
 huc accedit item, quoniam primordia rerum
 mollia constituunt, quae nos nativa videmus
 esse et mortali cum corpore funditus, utque 755
 debeat ad nilum iam rerum summa reverti
 de niloque renata vigescere copia rerum;
 quorum utrumque quid a verò iam distet habebis.
 deinde inimica modis multis sunt atque veneno
 ipsa sibi inter se; quare aut congressa peribunt 760
 aut ita diffugient ut tempestate coacta
 fulmina diffugere atque imbris ventosque videmus.

Denique quattuor ex rebus si cuncta creantur
 atque in eas rursum res omnia dissoluuntur,
 qui magis illa queunt rerum primordia dici 765
 quam contra res illorum retroque putari?
 alternis gignuntur enim mutantque colorem
 et totam inter se naturam tempore ab omni.
 sin ita forte putas ignis terraeque coire 770
 corpus et aerias auras roremque liquoris,
 nil in concilio naturam ut mutet eorum,
 nulla tibi ex illis poterit res esse creata,
 non animans, non exanimo cum corpore, ut arbos:

point, there is a least in them. Moreover since they assign soft first-beginnings of things, which we see to have birth and to be of a body altogether mortal, both the sum of things must in that case revert to nothing and the store of things be born anew and flourish out of nothing: now how wide of the truth both of these doctrines are you will already comprehend. In the next place these bodies are in many ways mutually hostile and poisonous; and therefore they will either perish when they have met, or will fly asunder just as we see, when a storm has gathered, lightnings and rains and winds fly asunder.

Again if all things are produced from four things and all again broken up into those things, how can they more be called first-beginnings of things than things be called their first-beginnings, the supposition being reversed? For they are begotten time about and interchange colour and their whole nature without ceasing. But if haply you suppose that the body of fire and of earth and air and the moisture of water meet in such a way that none of them in the union changes its nature, nothing I can tell you will be able to be thus produced out of them, neither living thing nor thing with inanimate body, as a tree; in fact

quippe suam quicque in coetu variantis acervi 775
 naturam ostendet mixtusque videbitur aer
 cum terra simul atque ardor cum røre manere.
 at primordia gignundis in rebus oportet
 naturam clandestinam caecamque adhibere,
 emineat nequid quod contra pugnet et obstet 780
 quominus esse queat proprie quodcumque creatur.

Quin etiam repetunt a caelo atque ignibus eius
 et primum faciunt ignem se vertere in auras
 aeris, hinc imbrem gigni terramque creari
 ex imbri retroque a terra cuncta reverti, 785
 umorem primum, post aera, deinde calorem,
 nec cessare haec inter se mutare, meare
 a caelo ad terram, de terra ad sidera mundi.
 quod facere haud ullo debent primordia pacto;
 immutabile enim quiddam superare necessest, 790
 ne res ad nilum redigantur funditus omnes.
 nam quodcumque suis mutatum finibus exit,
 continuo hoc mors est illius quod fuit ante.
 quapropter quoniam quae paulo diximus ante
 in commutatum veniunt, constare necessest 795
 ex aliis ea, quae nequeant convertier usquam,
 ne tibi res redeant ad nilum funditus omnes.

each thing amid the medley of this discordant mass will display its own nature and air will be seen to be mixed up with earth and heat to remain in union with moisture. But first-beginnings ought in begetting things to bring with them a latent and unseen nature in order that no thing stand out, to be in the way and prevent whatever is produced from having its own proper being.

Moreover they go back to heaven and its fires for a beginning, and first suppose that fire changes into air, next that from air water is begotten and earth is produced out of water, and that all in reverse order come back from earth, water first, next air, then heat, and that these cease not to interchange, to pass from heaven to earth, from earth to the stars of ether. All which first-beginnings must on no account do; since something unchangeable must needs remain over, that things may not utterly be brought back to nothing. For whenever a thing changes and quits its proper limits, at once this change of state is the death of that which was before. Wherefore since those things which we have mentioned a little before pass into a state of change, they must be formed out of others which cannot in any case be transformed, that you may not have things returning altogether to nothing. Why not rather hold that

quin potius tali natura praedita quaedam
 corpora constituas, ignem si forte crearint,
 posse eadem demptis paucis paucisque tributis, 800
 ordine mutato et motu, facere aeris auras,
 sic alias aliis rebus mutarier omnis?

‘At manifesta palam res indicat’ inquis ‘in auras
 aeris e terra res omnis crescere alique;
 et nisi tempestas indulget tempore fausto 805
 imbribus, ut tabē nimborum arbusta vacillent,
 solque sua pro parte fovet tribuitque calorem,
 crescere non possint fruges arbusta animantis.’
 scilicet et nisi nos cibus aridus et tener umor
 adiuvet, amisso iam corpore vita quoque omnis 810
 omnibus e nervis atque ossibus exsoluatur; ~~X~~
 adiutamur enim dubio procul atque alimur nōs
 certis ab rebus, certis aliae atque aliae res.
 nimirum quia multa modis communia multis
 multarum rerum in rebus primordia mixta 815
 sunt, ideo variis variaae res rebus aluntur.
 atque eadem magni refert primordia saepe
 cum quibus et quali positura contineantur
 et quos inter se dent motus accipiantque;
 namque eadem caelum mare terras flumina solem 820

there are certain bodies possessed of such a nature, that, if they have haply produced fire, the same may, after a few have been taken away and a few added on and the order and motion changed, produce air, and that all other things may in the same way interchange with one another?

‘But plain matter of fact clearly proves’ you say ‘that all things grow up into the air and are fed out of the earth; and unless the season at the propitious period send such abundant showers that the trees reel beneath the soaking storms of rain, and unless the sun on its part foster them and supply heat, corn trees living things could not grow.’ Quite true, and unless solid food and soft water should recruit us, the body would waste away and then the whole life would break up out of all the sinews and bones; for we beyond doubt are recruited and fed by certain things, this and that other thing by certain other things. Because many first-beginnings common to many things in many ways are mixed up in things, therefore sure enough different things are fed by different things. And it often makes a great difference with what things and in what position the same first-beginnings are held in union and what motions they mutually impart and receive; for the same make up

constituunt, eadem fruges arbusta animantis,
 verum aliis alioque modo commixta moventur.
 quin etiam passim nostris in versibus ipsis
 multa elementa vides multis communia verbis,
 cum tamen inter se versus ac verba necessest 825
 confiteare et re et sonitu distare sonanti.

tantum elementa queunt permutato ordine solo;
 at rerum quae sunt primordia, plura adhibere
 possunt unde queant variae res quaeque creari.

Nunc et Anaxagorae scrutemur homoeomerian 830
 quam Grai memorant nec nostra dicere lingua
 concedit nobis patrii sermonis egestas,
 sed tamen ipsam rem facilest exponere verbis.

principio, rerum quom dicit homoeomerian,
 ossa videlicet e pauxillis atque minutis 835

ossibus hic et de pauxillis atque minutis
 visceribus viscus gigni sanguenque creari
 sanguinis inter se multis coeuntibu' guttis
 ex aurique putat micis consistere posse.

aurum et de terris terram con crescere parvis, 840
 ignibus ex ignis, umorem umoribus esse,
 cetera consimili fingit ratione putatque.

heaven sea lands rivers sun, the same make up corn trees living things;
 but they are mixed up with different things and in different ways as
 they move. Nay you see throughout even in these verses of ours many
 elements common to many words, though you must needs admit that the
 lines and words differ one from the other both in meaning and in the
 sound wherewith they sound. So much can elements effect by a mere
 change of order; but those elements which are the first-beginnings of
 things can bring with them more combinations out of which different
 things can severally be produced.

Let us now also examine the homoeomeria of Anaxagoras as the
 Greeks term it, which the poverty of our native speech does not allow
 us to name in our own tongue; though it is easy enough to set forth in
 words the thing itself. First of all then, when he speaks of the homoeo-
 meria of things, you must know he supposes bones to be formed out of
 very small and minute bones and flesh of very small and minute flesh
 and blood by the coming together of many drops of blood, and gold he
 thinks can be composed of grains of gold and earth be a concretion of
 small earths and fires can come from fires and water from waters, and
 everything else he fancies and supposes to be produced on a like princi-

nec tamen esse ulla parte idem in rebus inane
 concedit neque corporibus finem esse secandis.
 quare in utraque mihi pariter ratione videtur 845
 errare atque illi, supra quos diximus ante.
 adde quod inbecilla nimis primordia fingit;
 si primordia sunt, simili quae praedita constant
 natura atque ipsae res sunt aequaeque laborant
 et pereunt neque ab exitio res ulla refrenat. 850
 nam quid in oppressu valido durabit eorum,
 ut mortem effugiat, leti sub dentibus ipsis?
 ignis an umor an aura? quid horum? sanguen an ossa?
 nil, ut opinor, ubi ex aequo res funditus omnis
 tam mortalis erit quam quae manifesta videmus 855
 ex oculis nostris aliqua vi victa perire.
 at neque reccidere ad nilum res posse neque autem
 crescere de nilo testor res ante probatas.
 praeterea quoniam cibus auget corpus alitque,
 scire licet nobis venas et sanguen et ossa 860

 sive cibos omnis commixto corpore dicent
 esse et habere in se nervorum corpora parva
 ossaque et omnino venas partisque cruoris,

ple. And yet at the same time he does not allow that void exists any-
 where in things, or that there is a limit to the division of things.
 Wherefore he appears to me on both these grounds to be as much mis-
 taken as those whom we have already spoken of above. In addition to
 this the first-beginnings which he supposes are too frail; if first-begin-
 nings they be which are possessed of a nature like to the things them-
 selves and are just as liable to suffering and death, and which nothing
 reins back from destruction. For which of them will hold out against
 a strong crushing force so as to escape death, in the very jaws of de-
 struction? fire or water or air? which of these? blood or bones? Not
 one methinks, since everything will be just as essentially mortal as those
 things which we see with the senses perish before our eyes vanquished
 by some force. But I appeal to facts demonstrated above for proof that
 things cannot fall away to nothing nor on the other hand grow from
 nothing. Again since food gives increase and nourishment to the body,
 you are to know that our veins and blood and bones [and the like are
 formed of things foreign to them in kind]; or if they shall say that all
 foods are of a mixed body and contain in them small bodies of sinews
 and bones and veins as well and particles of blood, it will follow that all

fiet uti cibus omnis, et aridus et liquor ipse,
 ex alienigenis rebus constare putetur, 865
 ossibus et nervis sanieque et sanguine mixto.
 praeterea quaecumque e terra corpora crescunt
 si sunt in terris, terram constare necessest
 ex alienigenis, quae terris exoriuntur.
 transfer item, totidem verbis utare licebit. 870
 in lignis si flamma latet fumusque cinisque,
 ex alienigenis consistent ligna necessest.
 praeterea tellus quae corpora cumque alit, auget

*

ex alienigenis, quae lignis *his* oriuntur.
 Linquitur hic quaedam latitandi copia tenvis, 875
 id quod Anaxagoras sibi sumit, ut omnibus omnis
 res putet inmixtas rebus latitare, sed illud
 apparere unum cuius sint plurima mixta
 et magis in promptu primaque in fronte locata.
 quod tamen a vera longe ratione repulsumst. 880
 conveniebat enim fruges quoque saepe, minaci
 robore cum saxi franguntur, mittere signum
 sanguinis aut aliquid, nostro quae corpore aluntur;

food, solid as well as liquid, must be held to be composed of things foreign to them in kind, of bones that is and sinews and matter and blood mixed up. Again if all the bodies which grow out of the earth, are in the earths, the earth must be composed of things foreign to it in kind which grow out of these earths. Apply again this reasoning to other things, and you must use just the same words. If flame and smoke and ash are latent in woods, woods must necessarily be composed of things foreign to them in kind. Again all those bodies, to which the earth gives food, it increases [out of things foreign to them in kind which rise out of the earth: thus too the bodies of flame which issue from the woods, are fed] out of things foreign to them in kind which rise out of these woods.

Here some slight opening is left for evasion, which Anaxagoras avails himself of, choosing to suppose that all things though latent are mixed up in things, and that is alone visible of which there are the largest number of bodies in the mixture and these more ready to hand and stationed in the first rank. This however is far banished from true reason. For then it were natural that corn too should often, when crushed by the formidable force of the stone, shew some mark of blood or some other of the things which have their nourishment in our body;

cum lapidi lapidem terimus, manare cruorem.
 consimili ratione herbis quoque saepe decebat 885
 et laticis dulcis guttas similique sapore
 mittere, lanigerae quali sunt ubere lactis,
 scilicet et glebis terrarum saepe friatis
 herbarum genera et fruges frondesque videri
 dispertita inter terram latitare minute, 890
 postremo in lignis cinerem fumumque videri,
 cum prae fracta forent, ignisque latere minutos.
 quorum nil fieri quoniam manifesta docet *res*,
 scire licet non esse in rebus res ita mixtas,
 verum semina multimodis inmixta latere 895
 multarum rerum in rebus communia debent.
 ‘At saepe in magnis fit montibus’ inquis ‘ut altis
 arboribus vicina cacumina summa terantur
 inter se, validis facere id cogentibus austris,
 donec flammai fulserunt flore coorto.’ 900
 scilicet et non est lignis tamen insitus ignis,
 verum semina sunt ardoris multa, terendo
 quae cum confluxere, creant incendia silvis.
 quod si facta foret silvis abscondita flamma,
 non possent ullum tempus celarier ignes, 905
 conficerent volgo silvas, arbusta cremarent.

and when we rub one stone on another, blood should ooze out. For like reasons it were fitting that grasses too should yield drops of a sweet liquid, like in flavour to those which a sheep has in its udder of milk; yes and that often, when clods of earth have been crumbled, kinds of grasses and corn and leaves should be found to lurk distributed among the earth in minute quantities; and lastly that ash and smoke and minute fires should be found latent in woods, when they were broken off. Now since plain matter of fact teaches that none of these results follows, you are to know that things are not so mixed up in things; but rather seeds common to many things must in many ways be mixed up and latent in things.

‘But it often comes to pass on high mountains’ you say ‘that contiguous tops of tall trees rub together, the strong southwinds constraining them so to do, until the flower of flame has broken out and they have burst into a blaze.’ Quite true and yet fire is not innate in woods; but there are many seeds of heat, and when they by rubbing have streamed together, they produce conflagrations in the forests. But if the flame was stored up ready made in the forests, the fire could not be concealed for any length of time, but would destroy forests, burn up trees indiscrimi-

iamne vides igitur, paulo quod diximus ante,
 permagni referre eadem primordia saepe
 cum quibus et quali positura contineantur
 et quos inter se dent motus accipiantque, 910
 atque eadem paulo inter se mutata creare
 ignes et lignum? quo pacto verba quoque ipsa
 inter se paulo mutatis sunt elementis,
 cum ligna atque ignes distincta voce notemus.
 denique iam quaecumque in rebus cernis apertis 915
 si fieri non posse putas, quin materiai
 corpora consimili natura praedita fingas,
 hac ratione tibi pereunt primordia rerum:
 fiet uti risu tremulo concussa cachinnent
 et lacrimis salsis umectent ora genasque. 920

Nunc age quod superest cognosce et clarius audi.
 nec me animi fallit quam sint obscura; sed acri
 percussit thyrsos laudis spes magna meum cor
 et simul incussit suavem mi in pectus amorem
 musarum, quo nunc instinctus mente yigenti 925
 avia Pieridum peragro loca nullius ante
 trita solo. iuvat integros accedere fontis
 atque haurire, iuvatque novos decerpere flores

nately. Do you now see, as we said a little before, that it often makes a very great difference with what things and in what position the same first-beginnings are held in union and what motions they naturally impart and receive, and that the same may when a little changed in arrangement produce say fires and a fir? just as the words too consist of elements only a little changed in arrangement, though we denote firs and fires with two quite distinct names. Once again, if you suppose that whatever you perceive among visible things cannot be produced without imagining bodies possessed of a like nature, in this way, you will find, the first-beginnings of things are destroyed: it will come to this that they will be shaken by loud fits of convulsive laughter and will bedew with salt tears face and cheeks.

Now mark and learn what remains to be known and hear it more distinctly. Nor does my mind fail to perceive how dark the things are; but the great hope of praise has smitten my heart with sharp thyrsus, and at the same time has struck into my breast sweet love of the muses, with which now inspired I traverse in blooming thought the pathless haunts of the Pierides never yet trodden by sole of man. I love to approach the untasted springs and to quaff, I love to cull fresh flowers

insignemque meo capiti petere inde coronam
 unde prius nulli velarint tempora musae; 930
 primum quod magnis doceo de rebus et artis
 religionum animum nodis exsolvere pergo,
 deinde quod obscura de re tam lucida pango
 carmina, musaeo contingens cuncta lepore.
 id quoque enim non ab nulla ratione videtur; 935
 sed veluti pueris absinthia taetra medentes
 cum dare conantur, prius oras pocula circum
 contingunt mellis dulci flavoque liquore,
 ut puerorum aetas improvida ludificetur
 labrorum tenuis, interea perpetet amarum 940
 absinthii laticem deceptaque non capiatur,
 sed potius tali pacto recreata valescat,
 sic ego nunc, quoniam haec ratio plerumque videtur
 tristior esse quibus non est tractata, retroque
 volgus abhorret ab hac, volui tibi suaviloquenti 945
 carmine Pierio rationem exponere nostram
 et quasi musaeo dulci contingere melle,
 si tibi forte animum tali ratione tenere
 versibus in nostris possem, dum perspicis omnem
 naturam rerum qua constet compta figura. 950
 Sed quoniam docui solidissima materiai

and gather for my head a distinguished crown from spots whence the
 muses have yet veiled the brows of none; first because I touch of great
 things and essay to release the mind from the fast bonds of religious
 scruples, and next because on a dark subject I pen such lucid verses
 o'erlaying all with the muses' charm. For that too would seem to be
 not without good grounds; but even as physicians when they purpose
 to give nauseous wormwood to children, first smear the rim round the
 bowl with the sweet yellow juice of honey, that the unthinking age of
 children may be fooled as far as the lips, and meanwhile drink up the
 bitter draught of wormwood and though beguiled yet not be betrayed,
 but rather by such means recover health and strength; so I now, since
 this doctrine seems generally somewhat bitter to those by whom it has
 not been handled, and the multitude shrinks back from it in dismay, I
 have resolved to set forth to you our doctrine in sweet-toned Pierian
 verse and o'erlay it as it were with the pleasant honey of the muses, if
 haply by such means I might engage your mind on my verses, till such
 time as you clearly perceive with what shape the whole nature of things
 has been put together.

But since I have taught that most solid bodies of matter fly about

corpora perpetuo volitare invicta per aevom,
 nunc age, summai quaedam sit finis eorum
 necne sit, evolvamus; item quod inane repertumst
 seu locus ac spatium, res in quo quaeque gerantur, 955
 pervideamus utrum finitum funditus omne
 constet an immensum pateat vasteque profundum.

Omne quod est igitur nulla regione viarum
 finitumst; namque extremum debebat habere.
 extremum porro nullius posse videtur 960
 esse, nisi ultra sit quod finiat; ut videatur
 quo non longius haec sensus natura sequatur.
 nunc extra summam quoniam nil esse fatendum,
 non habet extremum, caret ergo fine modoque.
 nec refert quibus adsistas regionibus eius; 965
 usque adeo, quem quisque locum possedit, in omnis
 tantundem partis infinitum omne relinquit.
 praeterea si iam finitum constituatur
 omne quod est spatium, siquis procurrat ad oras
 ultimus extremas iaciatque volatile telum, 970
 id validis utrum contortum viribus ire
 quo fuerit missum mavis longeque volare,
 an prohibere aliquid censes obstareque posse?

for ever unvanquished through all time, mark now, let us unfold whether there is or is not any limit to their sum; likewise let us clearly see whether that which has been found to be void, or room and space, in which things severally go on, is all of it altogether finite or stretches without limits and to an unfathomable depth.

Well then the existing universe is bounded in none of its dimensions; for then it must have had an outside. Again it is seen that there can be an outside of nothing, unless there be something beyond it to bound it, so that that is seen, farther than which this our nature of sense does not follow the thing. Now since we must admit that there is nothing outside the sum, it has no outside, and therefore is without end and limit. And it matters not in which of its regions you take your stand; so invariably, whatever position any one has taken up, he leaves the universe just as infinite as before in all directions. Again if for the moment all existing space be held to be bounded, supposing a man runs forward to its outside borders and stands on the utmost verge and then throws a winged javelin, do you choose that it when hurled with vigorous force shall advance to the point to which it has been sent and fly to a distance, or do you decide that something can get in its way

- alterutrum fatearis enim sumasque necessest.
 quorum utrumque tibi effugium praecludit et omne 975
 cogit ut exempta concedas fine patere.
 nam sive est aliquit quod probeat officiatque
 quominu' quo missum est veniat finique locet se,
 sive foras fertur, non est a fine profectum.
 hoc pacto sequar atque, oras ubicumque locaris 980
 extremas, quaeram quid telo denique fiat.
 fiet uti nusquam possit consistere finis
 effugiumque fugae prolatet copia semper.
- 998 postremo ante oculos res rem finire videtur;
 aer dissaepit collis atque aera montes, 985
 terra mare et contra mare terras terminat omnis;
 omne quidem vero nil est quod finiat extra.
- 984 Praeterea spatium summai totius omne
 undique si inclusum certis consisteret oris
 finitumque foret, iam copia material 990
 undique ponderibus solidis confluet ad imum
 nec res ulla geri sub caeli tegmine posset
 nec foret omnino caelum neque lumina solis,
- 990 quippe ubi materies omnis cumulata iaceret
 ex infinito iam tempore subsidendo. 995
 at nunc nimirum requies data principiorum

and stop it? for you must admit and adopt one of the two suppositions. Either of which shuts you out from all escape and compels you to grant that the universe stretches without end. For whether there is something to get in its way and prevent its coming whither it was sent and placing itself in the point intended, or whether it is carried forward, in either case it has not started from the end. In this way I will go on and, wherever you have placed the outside borders, I will ask what then becomes of the javelin. The result will be that an end can nowhere be fixed, and that the room given for flight will still prolong the power of flight. Lastly one thing is seen by the eyes to end another thing; air bounds off hills, and mountains air, earth limits sea and sea again all lands; the universe however there is nothing outside to end.

Again if all the space of the whole sum were enclosed within fixed borders and were bounded, in that case the store of matter by its solid weights would have streamed together from all sides to the lowest point nor could anything have gone on under the canopy of heaven, no nor would there have been a heaven nor sunlight at all, inasmuch as all matter, settling down through infinite time past, would lie together in a heap. But as it is, sure enough no rest is given to the bodies of the

corporibus nullast, quia nil est funditus imum
 quo quasi confluere et sedes ubi ponere possint.
 995 semper in adsiduo motu res quaeque geruntur
 partibus *e* cunctis infernaque suppeditantur 1000
 ex infinito cita corpora materiai.
 1002 est igitur natura loci spatiumque profundi,
 quod neque clara suo percurrere fulmina cursu
 perpetuo possint aevi labentia tractu
 nec prorsum facere ut restet minus ire meando: 1005
 usque adeo passim patet ingens copia rebus
 finibus exemptis in cunctas undique partis.
 Ipsa modum porro sibi rerum summa parare
 ne possit, natura tenet, quae corpus inani
 et quod inane autem est finiri corpore cogit, 1010
 ut sic alternis infinita omnia reddat,
 aut etiam alterutrum, nisi terminet alterum, eorum
 simplice natura pateat tamen inmoderatum.

*

nec mare nec tellus neque caeli lucida templa
 nec mortale genus nec divum corpora sancta 1015
 exiguum possent horai sistere tempus;
 nam dispulsa suo de coetu materiai

first-beginnings, because there is no lowest point at all, to which they might stream together as it were, and where they might take up their positions. All things are ever going on in ceaseless motion from all quarters and bodies of matter stirred to action are supplied from beneath out of infinite space. Therefore the nature of room and the space of the unfathomable void, is such as bright thunderbolts cannot race through in their course though gliding on through endless tract of time, no nor lessen one jot the journey that remains to go by all their travel: so huge a room is spread out on all sides for things without any bounds in all directions round.

Again nature keeps the sum of things from setting any limit to itself, since she compels body to be ended by void and void in turn by body, so that either she thus renders the universe infinite by this alternation of the two, or else the one of the two, in case the other does not bound it, with its single nature stretches nevertheless immeasurably. [But void I have already proved to be infinite; therefore matter must be infinite: for if void were infinite, and matter finite] neither sea nor earth nor the glittering quarters of heaven nor mortal kind nor the holy bodies of the gods could hold their ground one brief passing hour; since forced asunder from its

copia ferretur magnum per inane soluta,
 sive adeo potius numquam concreta creasset
 ullam rem, quoniam cogi disiecta nequisset. 1020
 nam certe neque consilio primordia rerum
 ordine se suo quaeque sagaci mente locarunt
 nec quos quaeque *darent motus pepigere profecto*,
 sed quia multa modis multis mutata per omne
 ex infinito vexantur percita plagis, 1025
 omne genus motus et coetus experiundo
 tandem deveniunt in talis disposituras,
 qualibus haec-rerum consistit summa creata,
 et multos etiam magnos servata per annos
 ut semel in motus coniectast convenientis, 1030
 efficit ut largis avidum mare fluminis undis
 integrent amnes et solis terra vapore
 fota novet fetus summissaque gens animantum
 floreat et vivant labentes aetheris ignes;
 quod nullo facerent pacto, nisi materiâi. 1035
 ex infinito suboriri copia posset,
 unde amissa solent reparare in tempore quaeque.
 nam veluta privata cibo natura animantum
 diffluit amittens corpus, sic omnia debent

union the store of matter would be dissolved and borne along the mighty void, or rather I should say would never have combined to produce any thing, since scattered abroad it could never have been brought together. For verily not by design did the first-beginnings of things station themselves each in its right place guided by keen-sighted intelligence, nor did they bargain sooth to say what motions each should assume, but because many in number and shifting about in many ways throughout the universe they are driven and tormented by blows during infinite time past, after trying motions and unions of every kind at length they fall into arrangements such as those out of which this our sum of things has been formed, and by which too it is preserved through many great years when once it has been thrown into the appropriate motions, and causes the streams to replenish the greedy sea with copious river-waters and the earth, fostered by the heat of the sun, to renew its produce, and the race of living things to breed and flourish, and the gliding fires of ether to live: all which these several things could in no wise bring to pass, unless a store of matter could rise up from infinite space, out of which store they are wont to make up in due season whatever has been lost. For as the nature of living things when robbed of food loses its body and wastes

dissolui simul ac defecit suppeditare 1040
 materies aliqua ratione aversa viai.
 nec plagæ possunt extrinsecus undique summam
 conservare omnem quaecumque est conciliata.
 cudere enim crebro possunt partemque morari,
 dum veniant aliae ac suppleri summa queatur. 1045
 interdum resilire tamen coguntur et una
 principiis rerum spatium tempusque fugai
 largiri, ut possint a coetu libera ferri.
 quare etiam atque etiam suboriri multa necessest,
 et tamen ut plagæ quoque possint suppetere ipsae, 1050
 infinita opus est vis undique material.

Illud in his rebus longe fuge credere, Memmi,
 in medium summae, quod dicunt, omnia niti,
 atque ideo mundi naturam stare sine ullis
 ictibus externis neque quoquam posse resolvi 1055
 summa atque ima, quod in medium sint omnia nixa:
 ipsum si quicquam posse in se sistere credis:
 et quae pondera sunt sub terris omnia sursum
 nitier in terraque retro requiescere posta,
 ut per aquas quae nunc rerum simulacra videmus. 1060
 et simili ratione animalia suppa vagari

away, thus all things must be broken up, as soon as matter has ceased to be supplied, diverted in any way from its proper course. Nor can blows from without hold together all the sum which has been brought into union. They can it is true frequently impinge upon and stay a part, until others come and the sum can be completed. At times however they are compelled to rebound and in so doing grant to the first-beginnings of things room and time for flight, to enable them to get clear away from the mass in union. Wherefore again and again I repeat many bodies must rise up; nay more that the blows themselves may not fail, there is need of an infinite supply of matter on all sides.

And herein, Memmius, be far from believing this, that all things as they say press to the centre of the sum, and that for this reason the nature of the world stands fast without any strokes from the outside and the uppermost and lowest parts cannot part asunder in any direction, because all things have been always pressing towards the centre (if you can believe that anything can rest upon itself); or that the heavy bodies which are beneath the earth all press upwards and are at rest on the earth, turned topsyturvy, just like the images of things which we see before us in the waters. In the same way too they maintain

contendunt neque posse e terris in loca caeli
 reccidere inferiora magis quam corpora nostra
 sponte sua possint in caeli templa volare;
 illi cum videant solem, nos sidera noctis 1065
 cernere, et alternis nobiscum tempora caeli
 dividere et noctes parilis agitare diebus.
 sed vanus stolidis haec
 amplexi quod habent perv
 nam medium nil esse potest 1070
 infinita. neque omnino, si iam *medium sit*,
 possit ibi quicquam consistere
 quam quavis alia longe ratione
 omnis enim locus ac spatium quod *inane vocamus*
 per medium per non medium, concedere *debet* 1075
 aequae ponderibus, motus quacumque feruntur.
 nec quisquam locus est, quò corpora cum *venerunt*,
 ponderis amissa vi possint stare *in inani*;
 nec quod *inane* autem est ulli subsistere debet,
 | quin, sua quod natura petit, concedere pergat. 1080
 haud igitur possunt tali ratione teneri
 res in concilio medii cuppedine victae.

Praeterea quoniam non omnia corpora fingunt
 in medium niti, sed terrarum atque liquoris,

that living things walk head downwards and cannot tumble out of earth
 into the parts of heaven lying below them any more than our bodies can
 spontaneously fly into the quarters of heaven; that when those see the
 sun, we behold the stars of night; and that they share with us time
 about the seasons of heaven and pass nights equal in length to our days.
 But groundless [error has devised such dreams] for fools, because they
 have embraced [false principles of reason.] For there can be no centre
 [where the universe is] infinite; no nor, even if there were a centre,
 could anything take up a position there [any more on that account] than
 for some quite different reason [be driven away.] For all room and space,
 which we term void, must through centre, through no-centre alike give
 place to heavy bodies, in whatever directions their motions tend. Nor
 is there any spot of such a sort that when bodies have reached it, they
 can lose their force of gravity and stand upon void; and that again
 which is void must not serve to support anything, but must, as its na-
 ture craves, continually give place. Things cannot therefore in such a
 way be held in union, o'ermastered by love of a centre.

Again since they do not suppose that all bodies press to the centre,

et quasi terreno quae corpore contineantur, 1085
 umorem ponti magnasque e montibus undas,
 at contra tenuis exponunt aeris auras
 et calidos simul a medio differrier ignis,
 atque ideo totum circum tremere aethera signis
 et solis flammam per caeli caerula pasci, 1090
 quod calor a medio fugiens se ibi conligat omnis,
 nec prorsum arboribus summos frondescere ramos
 posse, nisi a terris paulatim cuique cibatum

. 1095

 1100

ne volucris ritu flammarum moenia mundi
 diffugiant subito magnum per inane soluta
 et ne cetera consimili ratione sequantur
 neve ruant caeli penetralia templa superne 1105
 terraque se pedibus raptim subducat et omnis
 inter permixtas rerum caelique ruinas
 corpora solventes abeat per inane profundum,

but only those of earth and water, and such things as are held together by a body of an earthy nature, the fluid of the sea and great waters from the mountains; while on the other hand they teach that the subtle element of air and hot fires at the same time are carried away from the centre and that for this reason the whole ether round bickers with signs and the sun's flame is fed throughout the blue of heaven, because heat flying from the centre all gathers together there, and that the topmost boughs of trees could not put forth leaves at all, unless from time to time [nature supplied] food from the earth to each, [their reasons are not only false, but they contradict each other. Space I have already proved to be infinite; and space being infinite matter as I have said must also be infinite] lest after the winged fashion of flames the walls of the world should suddenly break up and fly abroad along the mighty void and all other things follow for like reasons and the innermost quarters of heaven tumble in from above and the earth in an instant withdraw from beneath our feet and amid the commingled ruins of things in it and of heaven, ruins unloosing the first bodies, should wholly pass away along the unfathomable void, so that in a moment of time

temporis ut puncto nil extet reliquiarum
 desertum praeter spatium et primordia caeca. 1110
 nam quacumque prius de parti corpora desse
 constitues, haec rebus erit pars ianua leti,
 hac se turba foras dabit omnis materiai.

Haec sei pernosces, parva perductus opella

.
 namque alid ex alio clarescet nec tibi caeca 1115
 nox iter eripiet quin ultima naturai
 pervideas: ita res accendent lumina rebus.

not a wrack should be left behind, nothing save untenanted space and viewless first-beginnings. For on whatever side you shall first determine first bodies to be wanting, this side will be the gate of death for things, through this the whole crowd of matter will fling itself abroad.

If you will well learn these things, then carried to the end with slight trouble [you will be able by yourself to understand all the rest.] For one thing after another will grow clear and dark night will not rob you of the road, to keep you from surveying the utmost ends of nature: in such wise things will light the torch for other things.

T. LUCRETI CARI
DE RERUM NATURA

LIBER SECUNDUS

Suave, mari magno turbantibus aequora ventis,
e terra magnum alterius spectare laborem;
non quia vexari quemquamst iucunda voluptas,
sed quibus ipse malis careas quia cernere suave est,
6 suave etiam bellī certamina magna tueri 5
5 per campos instructa tua sine parte pericli.
sed nil dulcius est, bene quam munita tenere
edita doctrina sapientum templa serena,
despicere unde queas alios passimque videre
errare atque viam palantis quaerere vitae, 10
certare ingenio, contendere nobilitate,
noctes atque dies niti praestante labore
ad summas emergere opes rerumque potiri.
o miseras hominum mentes, o pectora caeca!

It is sweet, when on the great sea the winds trouble its waters, to behold from land another's deep distress; not that it is a pleasure and delight that any should be afflicted, but because it is sweet to see from what evils you are yourself exempt. It is sweet also to look upon the mighty struggles of war arrayed along the plains without sharing yourself in the danger. But nothing is more welcome than to hold the lofty and serene positions well fortified by the learning of the wise, from which you may look down upon others and see them wandering all abroad and going astray in their search for the path of life, see the contest among them of intellect, the rivalry of birth, the striving night and day with surpassing effort to struggle up to the summit of power and be masters of the world. O miserable minds of men! o blinded

qualibus in tenebris vitae quantisque periclis 15
 degitur hoc aevi quodcumquest! nonne videre
 nil aliud sibi naturam latrare, nisi ut, quoi
 corpore seiunctus dolor absit, mente fruatur
 iucundo sensu cura semotu' metuque?
 ergo corpoream ad naturam pauca videmus 20
 esse opus omnino, quae demant cumque dolorem,
 delicias quoque uti multas substernere possint.
 gratius interdum neque natura ipsa requirit,
 si non aurea sunt iuvenum simulacra per aedes
 lampadas igniferas manibus retinentia dextris, 25
 lumina nocturnis epulis ut suppeditentur,
 nec domus argento fulget auroque renidet
 nec citharae reboant laqueata aurataque tecta,
 cum tamen inter se prostrati in gramine molli
 propter aquae rivum sub ramis arboris altae 30
 non magnis opibus iucunde corpora curant,
 praesertim cum tempestas adridet et anni
 tempora conspergunt viridantis floribus herbas.
 nec calidae citius decedunt corpore febres,
 textilibus si in picturis ostroque rubenti 35
 iacteris, quam si in plebeia veste cubandum est.
 quapropter quoniam nil nostro in corpore gazae

breasts! in what darkness of life and in how great dangers is passed
 all this term of life whatever its duration! not choose to see that nature
 craves for itself nothing more than that the man from whose body pain
 holds aloof, should in mind enjoy a feeling of pleasure exempt from care
 and fear? Therefore in respect of the body's nature we see that but
 little is at all needed in order that such things as take away pain, should
 be able to spread before us many delights as well. Nor at times does
 nature herself want any greater solace, although there are no golden
 images of youths through the house holding in their right hands flaming
 lamps, for supply of light to the nightly banquet, though the house
 shines not with silver nor glitters with gold nor do the pannelled and
 gilded roofs reecho to the harp, what time, though these things be want-
 ing, they spread themselves in groups on the soft grass beside a stream
 of water under the boughs of a high tree and at no great cost pleasantly
 refresh their bodies, above all when the weather smiles and the seasons
 of the year besprinkle the green grass with flowers. Nor do hot fevers
 sooner quit the body, if you toss about on pictured tapestry and blush-
 ing purple, than if you must lie under a poor man's blanket. Where-
 fore since treasures avail nothing in respect of our body nor birth nor

proficiunt neque nobilitas nec gloria regni,
 quod superest, animo quoque nil prodesse putandum;
 si non forte tuas legiones per loca campi 40
 fervere cum videas belli simulacra cientis,
 subsidiis magnis et ecum vi constabilitas, *gen. pl.*
 ornatasque armis statuas pariterque animatas,
 his tibi tum rebus timefactae religiones
 effugiunt animo pavide; mortisque timores 45
 tum vacuum pectus lincunt curaque solutum,
 fervere cum videas classem latequē vagari. 0
 quod si ridicula haec ludibriaque esse videmus,
 re veraque metus hominum curaeque sequaces
 nec metuunt sonitus armorum nec fera tela
 audacterque inter reges rerumque potentis 50
 versantur neque fulgorem reverentur ab auro
 nec clarum vestis splendorem purpureai,
 quid dubitas quin omni' sit haec rationi' potestas?
 omnis cum in tenebris praesertim vita laboret.
 nam veluti pueri trepidant atque omnia caecis 55
 in tenebris metuunt, sic nos in luce timemus
 interdum, nilo quae sunt metuenda magis quam
 quae pueri in tenebris pavitant finguntque futura.
 hunc igitur terrorem animi tenebrasque necessest

the glory of kingly power, advancing farther you must hold that they are of no service to the mind as well; unless may be when you see your legions swarm over the ground of the campus waging the mimicry of war, strengthened flank and rear by powerful reserves and great force of cavalry, and you marshall them equipped in arms and animated with one spirit, thereupon you find that religious scruples scared by these things fly panic-stricken from the mind; and that then fears of death leave the breast unembarrassed and free from care, when you see your fleet swarm forth and spread itself far and wide. But if we see that these things are food for laughter and mere mockeries, and in good truth the fears of men and dogging cares dread not the clash of arms and cruel weapons, if unabashed they mix among kings and kesars and stand not in awe of the glitter from gold nor the brilliant sheen of the purple robe, how can you doubt that this is wholly the prerogative of reason, when the whole of life withal is a struggle in the dark? For even as children are flurried and dread all things in the thick darkness, thus we in the daylight fear at times things not a whit more to be dreaded than those at which children shudder in the dark and fancy sure to be. This terror therefore and darkness of mind must be dis-

non radii solis neque lucida tela diei 60
discutiant, sed naturae species ratioque.

Nunc age, quo motu genitalia materiai
corpora res varias gignant genitasque resolvant
et qua vi facere id cogantur quaeque sit ollis
reddita mobilitas magnum per inane meandi, 65
expediam: tu te dictis praeberere memento.
nam certe non inter se stipata cohaeret
materies, quoniam minui rem *quamque* videmus
et quasi longinquo fluere omnia cernimus aevo
ex oculisque vetustatem subducere nostris, 70
cum tamen incolumis videatur summa manere
propterea quia, quae decedunt corpora cuique,
unde abeunt minuunt, quo venere augmine donant,
illa senescere at haec contra florescere cogunt,
nec remorantur ibi. sic rerum summa novatur 75
semper, et inter se mortales mutua vivunt.
augescunt aliae gentes, aliae minuuntur,
inque brevi spatio mutantur saecula animantum
et quasi cursores vitae lampada tradunt.

Si cessare putas rerum primordia posse 80
cessandoque novos rerum progignere motus,
avius a vera longe ratione vagaris.

pelled not by the rays of the sun and glittering shafts of day, but by the aspect and law of nature.

Now mark and I will explain by what motion the begetting bodies of matter do beget different things and after they are begotten again break them up, and by what force they are compelled so to do and what velocity is given to them for travelling through the great void: do you mind to give heed to my words. For verily matter does not cohere inseparably massed together, since we see that everything wanes and perceive that all things ebb as it were by length of time and that age withdraws them from our sight, though yet the sum is seen to remain unimpaired by reason that the bodies which quit each thing, lessen the things from which they go, gift with increase those to which they have come, compel the former to grow old, the latter to come to their prime, and yet abide not with these. Thus the sum of things is ever renewed and mortals live by a reciprocal dependency. Some nations wax, others wane, and in a brief space the races of living things are changed and like runners hand over the lamp of life.

If you think that first-beginnings of things can stop and by stopping propagate new motions of things, you wander far astray from the path

nam quoniam per inane vagantur, cuncta necessest
 aut gravitate sua ferri primordia rerum
 aut ictu forte alterius. nam *cum* cita saepe 85
 obvia confluxere, fit ut diversa repente
 dissiliant; neque enim mirum, durissima quae sint
 ponderibus solidis neque quicquam a tergo ibus obstet.
 et quo iactari magis omnia materiali
 corpora pervideas, reminiscere totius inum 90
 nil esse in summa, neque habere ubi corpora prima
 consistent, quoniam spatium sine fine modoquest
 inmensumque patere in cunctas undique partis
 pluribus ostendi et certa ratione probatumst.
 quod quoniam constat, nimirum nulla quies est 95
 reddita corporibus primis per inane profundum,
 sed magis adsiduo varioque exercita motu
 partim intervallis magnis confulta resultant,
 pars etiam brevibus spatiis vexantur ab ictu.
 et quaecumque magis condenso conciliatu 100
 exiguis intervallis convecta resultant,
 indupedita suis perplexis ipsa figuris,
 haec validas saxi radices et fera ferri
 corpora constituunt et cetera *de* genere horum.

of true reason: since they travel about through void, the first-beginnings of things must all move on either by their own weight or haply by the stroke of another. For when during motion they have, as often happens, met and clashed, the result is a sudden rebounding in an opposite direction; and no wonder, since they are most hard and of weight proportioned to their solidity and nothing behind gets in their way. And that you may more clearly see that all bodies of matter are in restless movement, remember that there is no lowest point in the sum of the universe, and that first bodies have not where to take their stand, since space is without end and limit and extends immeasurably in all directions round, as I have shewn in many words and as has been proved by sure reason. Since this then is a certain truth, sure enough no rest is given to first bodies throughout the unfathomable void, but driven on rather in ceaseless and varied motion they partly, after they have pressed together, rebound leaving great spaces between, while in part they are so dashed away after the stroke as to leave but small spaces between. And all that form a denser aggregation when brought together and rebound leaving trifling spaces between, held fast by their own close-tangled shapes, these form enduring bases of stone and unyielding bodies of iron

PAUCUIA QUAE PORRO MAGNUM PER INANE VAGANTUR 105
sed quae dissiliunt longe longeque recursant
 in magnis intervallis, haec aera rarum
 sufficiunt nobis et splendida lumina solis.
 multaque praeterea magnum per inane vagantur,
 conciliis rerum quae sunt reiecta nec usquam 110
 consociare etiam motus potuere recepta.
 cuius, uti memoro, rei simulacrum et imago
 ante oculos semper nobis versatur et instat.
 contemplator enim, cum solis lumina cumque
 inserti fundunt radii per opaca domorum: 115
 multa minuta modis multis per inane videbis
 corpora misceri radiorum lumine in ipso
 et velut aeterno certamine proelia pugnare
 edere turmatim certantia nec dare pausam,
 conciliis et discidiis exercita crebris; 120
 conicere ut possis ex hoc, primordia rerum
 quale sit in magno iactari semper inani.
 dumtaxat rerum magnarum parva potest res
 exemplare dare et vestigia notitiae.
 hoc etiam magis haec animum te advertere par est 125
 corpora quae in solis radiis turbare videntur,
 quod tales turbae motus quoque materiali
 significant clandestinos caecosque subesse.

and such like. But those which spring far off and rebound far leaving great spaces between, these furnish us with thin air and bright sunlight. And many more travel along the great void, which have been thrown off from the unions of things or though admitted have yet in no case been able likewise to assimilate their motions. Of this truth, even as I relate it, we have a representation and picture always going on before our eyes and present to us: observe whenever the rays are let in and pour the sunlight through the dark chambers of houses: you will see many minute bodies in many ways through the apparent void mingle in the midst of the light of the rays, and as in never-ending conflict skirmish and give battle combating in troops and never halting, driven about in frequent meetings and partings; so that you may guess from this, what it is for first-beginnings of things to be ever tossing about in the great void. So far as it goes, a small thing may give an illustration of great things and put you on the track of knowledge. And for this reason too it is meet that you should give greater heed to these bodies which are seen to tumble about in the sun's rays, because such tumblings imply that motions also of matter latent and unseen are at the bottom. For

multa videbis enim plagis ibi percita caecis
 commutare viam retroque repulsa reverti 130
 nunc huc nunc illuc in cunctas undique partis.
 scilicet hic a principiis est omnibus error.
 prima moventur enim per se primordia rerum;
 inde ea quae parvo sunt corpora conciliatu
 et quasi proxima sunt ad viris principiorum, 135
 ictibus illorum caecis impulsa cientur,
 ipsaque proporro paulo maiora lacesunt.
 sic a principiis ascendit motus et exit
 paulatim nostros ad sensus, ut moveantur
 illa quoque, in solis quae lumine cernere quimus 140
 nec quibus id faciant plagis apparet aperte.

Nunc quae mobilitas sit reddita materiali
 corporibus, paucis licet hinc cognoscere, Memmi.
 primum aurora novo cum spargit lumine terras
 et variae volucres nemora avia pervolitantes 145
 aera per tenerum liquidis loca vocibus opplent,
 quam subito soleat sol ortus tempore tali
 convestire sua perfundens omnia luce,
 omnibus in promptu manifestumque esse videmus.
 at vapor is quem sol mittit lumenque serenum 150
 non per inane meat vacuum; quo tardius ire

you will observe many things there impelled by unseen blows to change their course and driven back to return the way they came now this way now that way in all directions round. All you are to know derive this restlessness from the first-beginnings. For the first-beginnings of things move first of themselves; next those bodies which form a small aggregate and come nearest so to say to the powers of the first-beginnings, are impelled and set in movement by the unseen strokes of those first bodies, and they in turn stir up bodies which are a little larger. Thus motion mounts up from the first-beginnings and step by step issues forth to our senses, so that those bodies also move, which we can discern in the sunlight, though it is not clearly seen by what blows they so act.

Now what velocity is given to bodies of matter, you may apprehend, Memmius, in few words from this: when morning first sprinkles the earth with fresh light and the different birds flitting about the pathless woods through the buxom air fill all places with their clear notes, we see it to be plain and evident to all how suddenly the sun after rising is wont at such a time to overspread all things and clothe them with his light. But that heat which the sun emits and that bright light pass not through empty void; and therefore they are forced to travel more

cogitur, aerias quasi dum diverberet undas.
 nec singillatim corpuscula quaeque vaporis
 sed complexa meant inter se conque globata;
 quapropter simul inter se retrahuntur et extra 155
 officiuntur, uti cogantur tardius ire.
 at quae sunt solida primordia simplicitate,
 cum per inane meant vacuum nec res remoratur
 ulla foris atque ipsa, suis e partibus una,
 unum in quem coepere locum conixa feruntur, 160
 debent nimirum praecellere mobilitate
 et multo citius ferri quam lumina solis
 multiplexque loci spatium transcurrere eodem
 tempore quo solis pervolgant fulgura caelum.

*

[nec persectari primordia singula quaeque, 165
 ut videant qua quicque geratur cum ratione.

At quidam contra haec, ignari materiali,
 naturam non posse deum sine numine credunt
 tanto opere humanis rationibus admoderate
 tempora mutare annorum frugesque creare, 170
 et iam cetera, mortalis quae suadet adire
 ipsaque deducit dux vitae dia voluptas
 et res per Veneris blanditur saecula propagent,

slowly, until they cleave through the waves so to speak of air. Nor do the several minute bodies of heat pass on one by one, but closely entangled and massed together; whereby at one and the same time they are pulled back by one another and are impeded from without, so that they are forced to travel more slowly. But the first-beginnings which are of solid singleness, when they pass through empty void and nothing delays them from without and they themselves, single from the nature of their parts, are borne with headlong endeavour towards the one single spot to which their efforts tend, they must sure enough surpass in velocity and be carried along much more swiftly than the light of the sun, and race through many times the extent of space in the same time in which the beams of the sun fill the heaven throughout. * nor follow up the several first-beginnings to see by what law each thing goes on.

But some in opposition to this, being ignorant of matter, believe that nature cannot without the providence of the gods in such nice conformity to the ways of man vary the seasons of the year and bring forth crops, ay and procure all the other things, which divine pleasure the guide of life prompts men to approach, escorting them in person and enticing them by her fondlings to continue their races through the

ne genus occidat humanum. quorum omnia causa
 constituisse deos cum fingunt, omnibu' rebus 175
 magno opere a vera lapsi ratione videntur.
 nam quamvis rerum ignorem primordia quae sint,
 hoc tamen ex ipsis caeli rationibus ausim
 confirmare aliisque ex rebus reddere multis,
 nequaquam nobis divinitus esse creatam 180
 naturam mundi: *tanta stat* praedita culpa.
 quae tibi posterius, Memmi, faciemus aperta.
 nunc id quod superest de motibus expediemus.]

Nunc locus est, ut opinor, in his illud quoque rebus
 confirmare tibi, nullam rem posse sua vi 185
 corpoream sursum ferri sursumque meare;
 ne tibi dent in eo flammaram corpora fraudem.
 sursus enim versus gignuntur et augmina sumunt
 et sursum nitidae fruges arbustaque crescunt,
 pondera, quantum in se est, cum deorsum cuncta ferantur.
 nec cum subsiliunt ignes ad tecta domorum 191
 et celeri flamma degustant tigna trabesque,
 sponte sua facere id sine vi subigente putandum est.
 quod genus e nostro quom missus corpore sanguis
 emicat exultans alte spargitque cruorem. 195

arts of Venus, that mankind may not come to an end. For when they suppose that the gods designed all things for the sake of men, they seem to me in all respects to have strayed most widely from true reason. For even if I did not know what first-beginnings are, yet this, judging by the very arrangements of heaven, I would venture to affirm, and led by many other circumstances to maintain, that the nature of the world has by no means been made for us by divine power: so great are the defects with which it stands encumbered. All which, Memmius, we will hereafter make clear to you: we will now go on to explain what remains to be told of motions.

Now methinks is the place, herein to prove this point also that no bodily thing can by its own power be borne upwards and travel upwards; that the bodies of flames may not in this matter lead you into error. For they are begotten with an upward tendency, and in the same direction receive increase, and goodly crops and trees grow upwards, though their weights, so far as in them is, all tend downwards. And when fires leap to the roofs of houses and with swift flame lick up rafters and beams, we are not to suppose that they do so spontaneously without a force pushing them up. Even thus blood discharged from our body spirts out and springs up on high and scatters gore about.

nonne vides etiam quanta vi tigna trabesque
 respuat umor aquae? nam quo magis ursimus alte
 deiecta et magna vi multi pressimus aegre,
 tam cupide sursum revomit magis atque remittit,
 plus ut parte foras emergant exiliantque. 200
 nec tamen haec, quantum est in se, dubitamus, opinor,
 quin vacuum per inane deorsum cuncta ferantur.
 sic igitur debent flammae quoque posse per auras
 aeris expressae sursum succedere, quamquam
 pondera, quantum in se, deorsum, *deducere* pugnent, 205
 nocturnasque faces caeli sublime volantis
 nonne vides longos flammaram ducere tractus
 in quascumque dedit partis natura meatum?
 non cadere in terram stellas et sidera cernis?
 sol etiam *caeli* de vertice dissipat omnis 210
 ardorem in partis et lumine conserit arva;
 in terras igitur quoque solis vergitur ardor.
 transversosque volare per imbris fulmina cernis:
 nunc hinc nunc illinc abrupti nubibus ignes
 concursant; cadit in terras vis flammea volgo. 215
 Illud in his quoque te rebus cognoscere avemus,
 corpora cum deorsum rectum per inane feruntur,

See you not too with what force the liquid of water spits out logs and beams? the more we have pushed and forced them deep down and have pressed them in, many of us together, with all our might and much painful effort, with the greater avidity it vomits them up and casts them forth, so that they rise and start out more than half their length. And yet methinks we doubt not that these, so far as in them is, are all borne downwards through the empty void. In the same way flames also ought to be able, when squeezed out, to mount upward through the air, although their weights, so far as in them is, strive to draw them down. See you not too that the nightly meteors of heaven as they fly aloft draw after them long trails of flames in whatever direction nature has given them a passage? Do you not perceive stars and meteors fall to the earth? The sun also from the height of heaven sheds its heat on all sides and sows the fields with light; to the earth therefore as well the sun's heat tends. Lightnings also you see fly athwart the rains: now from this side now from that fires burst from the clouds and rush about; the force of flame falls to the earth all round.

This point too herein we wish you to apprehend: when bodies are borne downwards sheer through void, at quite uncertain times and

ponderibus propriis incerto tempore ferme
 incertisque loci spatiis decellere paulum,
 tantum quod momen mutatum dicere possis. 220
 quod nisi declinare solerent, omnia deorsum,
 imbris uti guttae, caderent per inane profundum,
 nec foret offensus natus nec plaga creata
 principiis: ita nil umquam natura creasset.

Quod si forte aliquis credit graviora potesse 225
 corpora, quo citius rectum per inane feruntur,
 incidere ex supero levioribus atque ita plagas
 gignere quae possint genitalis reddere motus,
 avius a vera longe ratione recedit.
 nam per aquas quaecumque cadunt atque aera rarum, 230
 haec pro ponderibus casus celerare necessest
 propterea quia corpus aquae naturaque tenvis
 aeris haut possunt aequae rem quamque morari,
 sed citius cedunt gravioribus exsuperata;
 at contra nulli de nulla parte neque ullo 235
 tempore inane potest vacuum subsistere rei,
 quin, sua quod natura petit, concedere pergat;
 omnia quapropter debent per inane quietum
 aequae ponderibus non aequis concita ferri.
 haud igitur poterunt levioribus incidere umquam 240

uncertain points of space they swerve a little from their equal poise: you just and only just can call it a change of inclination. If they were not used to swerve, they all would fall down, like drops of rain, through the deep void, and no clashing would have been begotten, nor blow produced among the first-beginnings: thus nature never would have produced aught.

But if haply any one believes that heavier bodies, as they are carried more quickly sheer through space, can fall from above on the lighter and so beget blows able to produce begetting motions, he goes most widely astray from true reason. For whenever bodies fall through water and thin air, they must quicken their descents in proportion to their weights, because the body of water and subtle nature of air cannot retard everything in equal degree, but more readily give way, overpowered by the heavier: on the other hand empty void cannot offer resistance to anything in any direction at any time, but must, as its nature craves, continually give way; and for this reason all things must be moved and borne along with equal velocity though of unequal weights through the unresisting void. Therefore heavier things will never be able to fall

ex supero graviora neque ictus gignere per se
 qui varient motus per quos natura gerat res.
 quare etiam atque etiam paulum inclinare necessest
 corpora; nec plus quam minimum, ne fingere motus
 obliquos videamur et id res vera refutet. 245
 namque hoc in promptu manifestumque esse videmus,
 pondera, quantum in sest, non posse obliqua meare,
 ex supero cum praecipitant, quod cernere possis;
 sed nil omnino *recta* regione viai
 declinare quis est qui possit cernere sese? 250
 Denique si semper motus conectitur omnis
 et vetere exoritur *semper* novus ordine certo
 nec declinando faciunt primordia motus
 principium quoddam quod fati foedera rumpat,
 ex infinito ne causam causa sequatur, 255
 libera per terras unde haec animantibus exstat,
 unde est haec, inquam, fati avolsa potestas
 per quam progredimur quo ducit quemque voluntas,
 declinamus item motus nec tempore certo
 nec regione loci certa, sed ubi ipsa tulit mens? 260
 nam dubio procul his rebus sua cuique voluntas
 principium dat et hinc motus per membra rigantur.

from above on lighter nor of themselves to beget blows sufficient to produce the varied motions by which nature carries on things. Wherefore again and again I say bodies must swerve a little; and yet not more than the least possible; lest we be found to be imagining oblique motions and this the reality should refute. For this we see to be plain and evident, that weights, so far as in them is, cannot travel obliquely, when they fall from above, at least so far as you can perceive; but that nothing can swerve in any case from the straight course, who is there that can perceive?

Again if all motion is ever linked together and a new motion ever springs from another in a fixed order and first-beginnings do not by swerving make some commencement of motion to break through the decrees of fate, that cause follow not cause from everlasting, whence have all living creatures here on earth, whence, I ask, has been wrested from the fates the power by which we go forward whither the will leads each, by which likewise we change the direction of our motions neither at a fixed time nor fixed place, but where and when the mind itself has prompted? For beyond a doubt in these things his own will makes for each a beginning and from this beginning motions are welled through

nonne vides etiam patefactis tempore puncto
 carceribus non posse tamen prorumpere equorum
 vim cupidam tam de subito quam mens avet ipsa? 265
 omnis enim totum per corpus material
 copia conquiri debet, concita per artus
 omnis ut studium mentis conixa sequatur;
 ut videas initum motus a corde creari
 ex animique voluntate id procedere primum, 270
 inde dari porro per totum corpus et artus.
 nec similest ut cum impulsus procedimus ictu
 viribus alterius magnis magnoque coactu;
 nam tum materiem totius corporis omnem
 perspicuumst nobis invitis ire rapique, 275
 donec eam refrenavit per membra voluntas.
 iamne vides igitur, quamquam vis externa multos
 pellat et invitos cogat procedere saepe
 praecipitesque rapi, tamen esse in pectore nostro
 quiddam quod contra pugnare obstareque possit? 280
 cuius ad arbitrium quoque copia material
 cogitur interdum flecti per membra per artus
 et proiecta refrenatur retroque residit.
 quare in seminibus quoque idem fateare necessest,

the limbs. See you not too, when the barriers are thrown open at a given moment, that yet the eager powers of the horses cannot start forward so instantaneously as the mind itself desires? the whole store of matter through the whole body must be sought out, in order that stirred up through all the frame it may follow with undivided effort the bent of the mind; so that you see the beginning of motion is born from the heart, and the action first commences in the will of the mind and next is transmitted through the whole body and frame. Quite different is the case when we move on propelled by a stroke inflicted by the strong might and strong compulsion of another; for then it is quite clear that all the matter of the whole body moves and is hurried on against our inclination, until the will has reined it in throughout the limbs. Do you see then in this case that, though an outward force often pushes men on and compels them frequently to advance against their will and to be hurried headlong on, there yet is something in our breast sufficient to struggle against and resist it? And when too this something chooses, the store of matter is compelled sometimes to change its course through the limbs and frame, and after it has been forced forward, is reined in and settles back into its place. Wherefore in seeds too you must

esse aliam praeter plagas et pondera causam 285
 motibus, unde haec est nobis innata potestas,
 de nilo quoniam fieri nil posse videmus.
 pondus enim prohibet ne plagis omnia fiant
 externa quasi vi; sed ne mens ipsa necessum
 intestinum habeat cunctis in rebus agendis 290
 et devicta quasi *hoc* cogatur ferre patique,
 id facit exiguum clinamen principiorum
 nec regione loci certa nec tempore certo.

Nec stipata magis fuit umquam materiai
 copia nec porro maioribus intervallis; 295
 nam neque adaugescit quicquam neque deperit inde.
 quapropter quo nunc in motu principiorum
 corpora sunt, in eodem ante acta aetate fuere
 et post haec semper simili ratione ferentur,
 et quae consuerint gigni gignentur eadem 300
 condicione et erunt et crescent vique valebunt,
 quantum cuique datum est per foedera naturai.
 nec rerum summam commutare ulla potest vis;
 nam neque, quo possit genus ullum materiai
 effugere ex omni, quicquam est *extra*, neque in omne 305
 unde coorta queat nova vis inrumpere et omnem
 naturam rerum mutare et vertere motus.

admit the same, admit that besides blows and weights there is another cause of motions, from which this power of free action has been begotten in us, since we see that nothing can come from nothing. For weight forbids that all things be done by blows through as it were an outward force; But that the mind itself does not feel an internal necessity in all its actions and is not as it were overmastered and compelled to bear and put up with this, is caused by a minute swerving of first-beginnings at no fixed part of space and no fixed time.

Nor was the store of matter ever more closely massed nor held apart by larger spaces between; for nothing is either added to its bulk or lost to it. Wherefore the bodies of the first-beginnings in time gone by moved in the same way in which now they move, and will ever hereafter be borne along in like manner, and the things which have been wont to be begotten will be begotten after the same law and will be and will grow and will wax in strength so far as is given to each by the decrees of nature. And no force can change the sum of things for there is nothing outside, either into which any kind of matter can escape out of the universe or out of which a new supply can arise and burst into the universe and change all the nature of things and alter their motions.

Illud in his rebus non est mirabile, quare,
 omnia cum rerum primordia sint in motu,
 summa tamen summa videatur stare quiete, 310
 praeterquam siquid proprio dat corpore motus.
 omnis enim longe nostris ab sensibus infra
 primorum natura iacet: quapropter, ubi ipsa
 cernere iam nequeas, motus quoque surpere debent;
 praesertim cum, quae possimus cernere, celent 315
 saepe tamen motus spatio diducta locorum.
 nam saepe in colli tondentes pabula laeta
 lanigerae reptant pecudes quo quamque vocantes
 invitant herbae gemmantes rore recenti,
 et satiati agni ludunt blandeque coruscant; 320
 omnia quae nobis longe confusa videntur
 et velut in viridi candor consistere colli.
 praeterea magnae legiones cum loca cursu
 camporum complent belli simulacra cientes,
 fulgor ibi ad caelum se tollit totaque circum 325
 aere renidescit tellus supterque virum vi
 excitur pedibus sonitus clamoreque montes
 icti reiectant voces ad sidera mundi
 et circumvolitant equites mediosque repente
 tramittunt valido quatientes impete campos. 330

And herein you need not wonder at this, that though the first-
 beginnings of things are all in motion, yet the sum is seen to rest in
 supreme repose, unless where a thing exhibits motions with its indivi-
 dual body. For all the nature of first things lies far away from our
 senses beneath their ken; and therefore since they are themselves be-
 yond what you can see, they must withdraw from sight their motions
 also; and the more so that the things which we can see, do yet often
 conceal their motions when a great distance off. For often the woolly
 flocks as they crop the glad pastures on a hill, creep on whither the
 grass jewelled with fresh dew summons and invites each, and the lambs
 fed to the full gambol and playfully butt; all which objects appear to
 us from a distance to be blended together and to rest like a white spot
 on a green hill. Again when mighty legions fill with their movements
 all parts of the plains waging the mimicry of war, the glitter then lifts
 itself up to the sky and the whole earth round gleams with brass and
 beneath a noise is raised by the mighty trampling of men and the moun-
 tains stricken by the shouting reecho the voices to the stars of heaven,
 and horsemen fly about and suddenly wheeling scour across the middle
 of the plains, shaking them with the vehemence of their charge. And

et tamen est quidam locus altis montibus *unde*
stare videntur et in campis consistere fulgor.

Nunc age iam deinceps cunctarum exordia rerum
qualia sint et quam longe distantia formis
percipe, multigenis quam sint variata figuris; 335
non quo multa parum simili sint praedita forma,
sed quia non vulgo paria omnibus omnia constant.
nec mirum; nam cum sit eorum copia tanta
ut neque finis, uti docui, neque summa sit ulla,
debent nimirum non omnibus omnia prorsum 340
esse pari filo similique adfecta figura.
praestat rem genus humanum mutaeque natantes
squamigerum pecudes et laeta armenta feraeque
et variae volucres, laetantia quae loca aquarum
concelebrant circum ripas fontisque lacusque, 345
et quae pervolgant nemora avia pervolitantes;
quorum unum quidvis generatim sumere perge,
invenies tamen inter se differre figuris.
nec ratione alia proles cognoscere matrem
nec mater posset prolem; quod posse videmus 350
nec minus atque homines inter se nota cluere.
nam saepe ante deum vitulus delubra decora

yet there is some spot on the high hills, seen from which they appear to stand still and to rest on the plains as a bright spot.

Now mark and next in order apprehend of what kind and how widely differing in their forms are the beginnings of all things, how varied by manifold diversities of shape; not that a scanty number are possessed of a similar form, but because they are not all without exception one like another. And no wonder; for since there is so great a store of them that, as I have shewn, there is no end or sum, they must sure enough not be all marked by a precisely equal bulk and like shape, one with another. The race of man vouches the fact and the mute swimming shoals of the scaly tribes and the blithe herds and wild beasts and the different birds which haunt the gladdening watering spots about river-banks and springs and pools, and those which flit about and throng the pathless woods: go and take any one you like in any one kind, and you will yet find that they differ in shapes, every one from every other. And in no other way could child recognise mother or mother child; and this we see that they all can do, and that they are just as well known to one another as human beings are. Thus often in front of the beauteous shrines of the gods a calf falls sacrificed beside

turicremas propter mactatus concidit aras
 sanguinis expirans calidum de pectore flumen;
 at mater viridis saltus orbata peragrans 355
 noscit humi pedibus vestigia pressa bisulcis,
 omnia convisens oculis loca si queat usquam
 conspiciere amissum fetum, completque querellis
 frondiferum nemus absistens et crebra revisit
 ad stabulum desiderio perfixa iuvenci, 360
 nec tenerae salices atque herbae rore vigentes
 fluminaque illa queunt summis labentia ripis
 oblectare animum sumptamque avertere curam,
 nec vitulorum aliae species per pabula laeta
 derivare queunt animum curaque levare: 365
 usque adeo quiddam proprium notumque requirit.
 praeterea teneri tremulis cum vocibus haedi
 cornigeras norunt matres agnique petulci
 balantum pecudes: ita, quod natura reposcit,
 ad sua quisque fere decurrunt ubera lactis. 370
 postremo quodvis frumentum non tamen omne
 quique suo genere inter se simile esse videbis,
 quin intercurrat quaedam distantia formis.
 concharumque genus parili ratione videmus
 pingere telluris gremium, qua mollibus undis 375

the incense-burning altars, spirting from its breast a warm stream of blood; but the bereaved mother as she ranges over the green lawns knows the footprints stamped on the ground by the cloven hoofs, scanning with her eyes every spot to see if she can anywhere behold her lost youngling: then she fills with her moanings the leafy wood as she desists from her search and again and again goes back to the stall pierced to the heart by the loss of her calf; nor can the soft willows and grass quickened with dew and those rivers gliding level with their banks comfort her mind and put away the care that is on her, nor can other forms of calves throughout the glad pastures divert her mind and ease it of its care: so persistently she seeks something special and known. Again the tender kids with their shaking voices know their horned dams and the butting lambs the flocks of bleating sheep: thus they run, as nature craves, each without fail to its own udder of milk. Lastly in the case of any kind of corn you like you will yet find that any one grain is not so similar to any other in the same kind, but that there runs through them some difference to distinguish the forms. On a like principle of difference we see the class of shells paint the lap of earth,

litoris incurvi bibulam pavit aequor harenam.
 quare etiam atque etiam simili ratione necessest,
 natura quoniam constant neque facta manu sunt
 unius ad certam formam primordia rerum,
 dissimili inter se quaedam volitare figura. 380

Perfacile est tali ratione exsolvere nobis
 quare fulmineus multo penetratior ignis
 quam noster fuat e taedis terrestribus ortus;
 dicere enim possis caelestem fulminis ignem
 suptilem magis e parvis constare figuris 385
 atque ideo transire foramina quae nequit ignis
 noster hic e lignis ortus taedaeque creatus.
 praeterea lumen per cornum transit, at imber
 respuitur. quare? nisi luminis illa minora
 corpora sunt quam de quibus est liquor almus aquarum.
 et quamvis subito per colum vina videmus 391
 perfluere; at contra tardum cunctatur olivom,
 aut quia nimirum maioribus est elementis
 aut magis hamatis inter se perque plicatis,
 atque ideo fit uti non tam diducta repente 395
 inter se possint primordia singula quaeque
 singula per cuiusque foramina permanare.

Huc accedit uti mellis lactisque liquores

where the sea with gentle waves beats on the thirsty sand of the winding shore. Therefore again and again I say it is necessary for like reasons that first-beginnings of things, since they exist by nature and are not made by hand after the exact model of one, should fly about with shapes in some cases differing one from the other.

It is right easy for us on such a principle to explain why the fire of lightning has much more power to pierce than ours which is born of earthly pinewood: you may say that the heavenly fire of lightning subtle as it is is formed of smaller shapes and therefore passes through openings which this our fire cannot pass born as it is of woods and sprung from pine. Again light passes through horn, but rain is thrown off. Why? if not that those first bodies of light are smaller than those of which the nurturing liquid of water is made. And quickly as we see wines flow through a strainer, sluggish oil on the other hand is slow to do so, because sure enough it consists of elements either larger in size or more hooked and tangled in one another, and therefore it is that the first-beginnings of things cannot so readily be separated from each other and severally stream through the several openings of any thing.

Moreover the liquids honey and milk excite a pleasant sensation of

iucundo sensu linguae tractentur in ore;
 at contra taetra absinthi natura ferique 400
 centauri foedo pertorquent ora sapore;
 ut facile agnoscas e levibus atque rutundis
 esse ea quae sensus iucunde tangere possunt,
 at contra quae amara atque aspera cumque videntur,
 haec magis hamatis inter se nexa teneri 405
 proptereaue solere vias rescindere nostris
 sensibus introituque suo perrumpere corpus.

Omnia postremo bona sensibus et mala tactu
 dissimili inter se pugnant perfecta figura;
 ne tu forte putes serrae stridentis acerbum 410
 horrorem constare elementis levibus aequae
 ac musaea mele, per chordas organici quae
 mobilibus digitis expergefata figurant;
 neu simili penetrare putes primordia forma
 in nares hominum, cum taetra cadavera torrent. 415
 et cum scena croco Cilici perfusa recens est
 araque Panchaeos exhalat propter odores;
 neve bonos rerum simili constare colores
 semine constituas, oculos qui pascere possunt,
 et qui compungunt aciem lacrimareque cogunt 420

tongue when held in the mouth; but on the other hand the nauseous nature of wormwood and of harsh centaury writhe the mouth with a noisome flavour; so that you may easily see that the things which are able to affect the senses pleasantly, consist of smooth and round elements; while all those on the other hand which are found to be bitter and harsh, are held in connexion by particles that are more hooked and for this reason are wont to tear open passages into our senses and in entering in to break through the body.

All things in short which are agreeable to the senses and all which are unpleasant to the feeling are mutually repugnant, formed as they are out of an unlike first shape; lest haply you suppose that the harsh grating of the creaking saw consists of elements as smooth as those of tuneful melodies which musicians wake into life with nimble fingers and give shape to on strings; or suppose that the first-beginnings are of like shape which pass into the nostrils of men, when noisome carcasses are burning, and when the stage is fresh sprinkled with Cilician saffron, while the altar close by exhales Panchaeian odours; or decide that the pleasant colours of things which are able to feast the eyes are formed of a seed like to the seed of those which make the pupil smart and force

aut foeda specie diri turpesque videntur.
 omnis enim, sensus quae mulcet cumque, *figura*
 haut sine principali aliquo levore creatast;
 at contra quaecumque molesta atque aspera constat,
 non aliquo sine materiae squalore repertast. 425
 sunt etiam quae iam nec levia iure putantur
 esse neque omnino flexis mucronibus unca,
 sed magis angellis paulum prostantibu' *quique*
 titillare magis sensus quam laedere possint;
 faecula iam quo de genere est inulaeque sapor. 430
 denique iam calidos ignis gelidamque pruinam
 dissimili dentata modo compungere sensus
 corporis, indicio nobis est tactus uterque.
 tactus enim, tactus, pro divum numina sancta,
 corporis est sensus, vel cum res externa sese 435
 insinuat, vel cum laedit quae in corpore natast
 aut iuvat egrediens genitalis per Veneris res,
 aut ex offensu cum turbant corpore in ipso
 semina confunduntque inter se concita sensum;
 ut si forte manu quamvis iam corporis ipse 440
 tute tibi partem ferias atque experiare.
 quapropter longe formas distare necessest
 principiis, varios quae possint edere sensus.

it to shed tears or from their disgusting aspect look hideous and foul. For every shape which gratifies the senses has been formed not without a smoothness in its elements; but on the other hand whatever is painful and harsh, has been produced not without some roughness of matter. There are too some elements which are with justice thought to be neither smooth nor altogether hooked with barbed points, but rather to have minute angles slightly projecting, such as can tickle rather than hurt the senses; of which class tartar of wine is formed and the flavours of elecampane. Again that hot fires and cold frost have fangs of a dissimilar kind wherewith to pierce the senses, is proved to us by the touch of each. For touch, touch, ye holy divinities of the gods, is feeling of the body, either when an extraneous thing makes its way in, or when a thing which is born in the body hurts it, or gives pleasure as it issues forth by the birth-bestowing ways of Venus, or when from some collision the seeds are disordered within the body and distract the feeling by their mutual disturbance; as if haply you were yourself to strike with the hand any part of the body you please and so make trial. Wherefore the shapes of the first-beginnings must differ widely, since they are able to give birth to different feelings.

Denique quae nobis durata ac spissa videntur,
 haec magis hamatis inter sese esse necessest 445
 et quasi ramosis alte compacta teneri.
 in quo iam genere in primis adamantina saxa
 prima acie constant ictus contemnere sueta
 et validi silices ac duri robora ferri
 aeraque quae claustris restantia vociferantur. 450
 illa quidem debent e levibus atque rutundis
 esse magis, fluvido quae corpore liquida constant;
 NAMQUE PAPAVERIS HAUSTUS ITEMST FACILIS QUOD AQUARUM
 nec retinentur enim inter se glomeramina quaeque
 et procursus item proclive volubilis exstat. 455
 omnia postremo quae puncto tempore cernis
 diffugere, ut fumum nebulas flammasque, necessest,
 si minus omnibu' sunt e levibus atque rutundis,
 at non esse tamen perplexis indupedita,
 pungere uti possint corpus penetrareque laxa 460
 nec tamen haerere inter se; quodcumque videmus
 sensibu' sic latum, facile ut cognoscere possis
 non e perplexis sed acutis esse elementis.
 sed quod amara vides eadem quae fluvida constant,
 sudor uti maris est, minime mirabile habeto; 465
 nam quod fluvidus est, e levibus atque rutundis

Again things which look hard and dense must consist of particles more hooked together, and be held in union because compacted throughout with branch-like elements. In this class first of all adamant rocks stand in foremost line inured to despise blows, and stout blocks of basalt and the strength of hard iron and brass bolts which cry aloud as they hold fast to their staples. Those things which are liquid and of fluid body ought to consist more of smooth and round elements; for the several drops have no mutual cohesion and their onward course too has a ready flow downwards. All things lastly which you see disperse themselves in an instant, as smoke mists and flames, if they do not consist entirely of smooth and round, must yet not be held fast by closely tangled elements, so that they may be able to pierce the body and enter into loose substances, yet not stick together: thus you may easily know, that whatever we see in this way conveyed to the senses, consists not of tangled but of pointed elements. Do not however hold it to be wonderful that some things which are fluid you see to be likewise bitter, for instance the sea's moisture: because it is fluid, it consists of smooth and round particles, and many rough bodies mixed up with these produce

est, et *squalida multa creant* admixta doloris
 corpora; nec tamen haec retineri hamata necessumst;
 scilicet esse globosa tamen, cum squalida constent,
 provolvi simul ut possint et laedere sensus. 470
 et quo mixta putes magis aspera levibus esse
 principiis, unde est Neptuni corpus acerbum,
 est ratio discernendi; seorsumque videndi
 umor dulcis, ubi per terras crebrius idem
 percolatur, ut in foveam fluat ac mansuescat; 475
 linquit enim supera taetri primordia viri,
 aspera quom magis in terris haerescere possint.

Quod quoniam docui, pergam conectere rem quae
 ex hoc apta fidem ducat, primordia rerum
 finita variare figurarum ratione, 480
 quod si non ita sit, rursum iam semina quaedam
 esse infinito debebunt corporis auctu.
 nam quoniam eadem una cuiusvis in brevitatem
 corporis inter se multum variare figurae
 non possunt: fac enim minimis e partibus esse 485
 corpora prima tribus, vel paulo pluribus auge;
 nempe ubi eas partis unius corporis omnis,
 summa atque ima locans, transmutans dextera laevis,
 omnimodis expertus eris, quam quisque det ordo

pains; and yet they must not be hooked so as to hold together: you are to know that though rough, they are yet spherical, so that while they roll freely on, they may at the same time hurt the senses. And that you may more readily believe that with smooth are mixed rough first-beginnings from which Neptune's body is made bitter, there is a way of separating these, and of seeing apart how the fresh water, when it is often filtered through the earth, flows into a trench and sweetens; for it leaves above the first-beginnings of the nauseous saltness, inasmuch as the rough particles can more readily stay behind in the earth.

And now that I have shewn this, I will go on to link to it a truth which depends on this and from this draws its proof: the first-beginnings of things have different shapes, but the number of shapes is finite. If this were not so, then once more it would follow that some seeds must be of infinite bulk of body. For since in one and the same small size of any first body you like the shapes cannot vary much from one another:—say for instance that first bodies consist of three least parts, or augment them by a few more; when to wit in all possible ways, by placing each in turn at the top and at the bottom, by making the right change places with the left, you shall have tried all those parts of one

formai speciem totius corporis eius, 490
 quod superest, si forte voles variare figuras,
 addendum partis alias erit, inde sequetur,
 adsimili ratione alias ut postulet ordo,
 si tu forte voles etiam variare figuras:
 ergo formarum novitatem corporis augmen 495
 subsequitur. quare non est ut credere possis
 esse infinitis distantia semina formis,
 ne quaedam cogas inmani maximitate
 esse, supra quod iam docui non posse probari.
 iam tibi barbaricae vestes Meliboeaque fulgens 500
 purpura Thessalico concharum tacta colore

 aurea pavonum ridenti imbuta lepore
 saecla, novo rerum superata colore iacerent
 et contemptus odor smyrnae mellisque sapores,
 et cycnea mele Phoebeaque daedala chordis 505
 carmina consimili ratione oppressa silerent;
 namque aliis aliud praestantius exoreretur.
 cedere item retro possent in deteriores
 omnia sic partis, ut diximus in melioris;
 namque aliis aliud retro quoque taetrius esset 510
 naribus auribus atque oculis orisque sapor.

first body and found what manner of shape each different arrangement gives to the whole of that body, if after all this haply you shall wish still to vary the shapes, you will have to add other parts: it will next follow that for like reasons the arrangement will require other parts, if haply you shall wish still again to vary the shapes:—from all this it results that increase of bulk in the body follows upon newness of the shapes. Wherefore you cannot possibly believe that seeds have an infinite variety of forms, lest you force some to be of a monstrous hugeness, which as I have above shewn cannot be proved. Moreover I tell you barbaric robes and radiant Meliboean purple dipped in Thessalian dye of shells [and the hues which are displayed] by the golden brood of peacocks steeped in laughing beauty would all be thrown aside surpassed by some new colour of things; the smell of myrrh would be despised and the flavours of honey, and the melodies of the swan and Phoebean tunes set off by the varied play of strings would in like sort be suppressed and silenced; for something ever would arise more surpassing than the rest. All things likewise might fall back into worse states, even as we have said they might advance to better; for reversely too one thing would be more noisome than all other things to nostril ear and eye and taste.

quae quoniam non sunt, *sed* rebus reddita certa
 finis utrimque tenet summam, fateare necessest
 materiem quoque finitis differre figuris.

denique ab ignibus ad gelidas iter usque pruinas 515

finitumst retroque pari ratione remensumst;
 extima enim calor ac frigus, mediique tepores
 interutraque iacent explentes ordine summam.

ergo finita distant ratione creata,

ancipiti quoniam mucroni utrimque notantur, 520

hinc flammis illinc rigidis infesta pruinis.

Quod quoniam docui, pergam conectere rem quae
 ex hoc apta fidem ducat, primordia rerum,

inter se simili quae sunt perfecta figura,

infinita cluere. etenim distantia cum sit 525

formarum finita, necesse est quae similes sint

esse infinitas aut summam materiai

finitam constare, id quod non esse probavi

versibus ostendens corpuscula materiai

ex infinito summam rerum usque tenere, 530

undique protelo plagarum continuato.

nam quod rara vides magis esse animalia quaedam
 fecundamque minus naturam cernis in illis,

Now since these things are not so, but a fixed limit has been assigned to things which bound their sum on each side, you must admit that matter also has a finite number of different shapes. Once more from summer fires to chill frosts a definite path is traced out and in like manner is again travelled back; for cold and heat lie on the outside, and moderate warmth midway between both, filling up in succession the sum. Therefore things produced differ by finite degrees, since on each side they are marked off by points, one at one, another at the other end, molested on the one hand by flames, on the other by stiffening frosts.

And now that I have shewn this, I will go on to link to it a truth which depends on this and from this draws its proof: the first-beginnings of things which have a like shape one with the other, are infinite in number. For since the difference of forms is finite, those which are like must be infinite or the sum of matter will be finite, which I proved not to be the case, when I shewed in my verses that the minute bodies of matter from everlasting continually uphold the sum of things through an uninterrupted succession of blows on all sides. For though you see that some animals are rarer than others and discern a less fruitful nature in

at regione locoque alio terrisque remotis
 multa licet genere esse in eo numerumque repleti; 535
 sicut quadripedum cum primis esse videmus
 in genere anguimanus elephantos, India quorum
 milibus e multis vallo munitur eburno,
 ut penitus nequeat penetrari: tanta ferarum
 vis est, quarum nos perpauca exempla videmus. 540
 sed tamen id quoque uti concedam, quamlibet esto
 unica res quaedam nativo corpore sola,
 cui similis toto terrarum *nulla* sit orbi;
 infinita tamen nisi erit vis material
 unde ea progigni possit concepta, creari 545
 non poterit, neque, quod superest, procreare alique.
 quippe etenim sumam hoc quoque uti finita per omne
 corpora iactari unius genitalia rei,
 unde ubi qua vi et quo pacto congressa coibunt
 materiae tanto in pelago turbaque aliena? 550
 non, ut opinor, habent rationem conciliandi;
 sed quasi naufragiis magnis multisque coortis
 disiectare solet magnum mare transtra gubernata
 antemnas proram malos tonsasque natantis
 per terrarum omnis oras fluitantia aplustra 555

them, yet in another quarter and spot and in distant lands there may be many of that kind and the full tale may be made up; just as we see that in the class of four-footed beasts snake-handed elephants are elsewhere especially numerous; for India is so fenced about with an ivory rampart made out of many thousands of these, that its inner parts cannot be reached, so great is the quantity of brutes, of which we see but very few samples. But yet though I should grant this point too: be there even as you will some one thing sole in its kind existing alone with a body that had birth, and let no other thing resemble it in the whole world; yet unless there shall be an infinite supply of matter out of which it may be conceived and brought into being, it cannot be produced, and, more than this it cannot have growth and food. For though I should assume this point also that birth-giving bodies of some one thing are tossed about in finite quantity throughout the universe, whence, where, by what force and in what way shall they meet together and combine in so vast a sea, such an alien medley of matter? They have methinks no way of uniting; but even as when great and numerous shipwrecks have occurred, the great sea is wont to tumble about banks rudders yards prow masts and swimming oars, so that poop-fittings are

ut videantur et indicium mortalibus edant,
 infidi maris insidias virisque dolumque
 ut vitare velint, neve ullo tempore credant,
 subdola cum ridet placidi pellacia ponti,
 sic tibi si finita semel primordia quaedam 560
 constitues, aevom debebunt sparsa per omnem
 disiectare aestus diversi materiai,
 numquam in concilium ut possint compulsa coire
 nec remorari in concilio nec crescere adaucta;
 quorum utrumque palam fieri manifesta docet res, 565
 et res progigni et genitas procrecere posse.
 esse igitur genere in quovis primordia rerum
 infinita palam est unde omnia suppeditantur.
 Nec superare queunt motus itaque exitiales
 perpetuo neque in aeternum sepelire salutem, 570
 nec porro rerum genitales auctificique
 motus perpetuo possunt servare creata.
 sic aequo geritur certamine principiorum
 ex infinito contractum tempore bellum:
 nunc hic nunc illic superant vitalia rerum 575
 et superantur item. miscetur funere vagor
 quem pueri tollunt visentis luminis oras;

seen floating about along every shore and utter to mortals a warning to try to shun the snares and violence and guile of the faithless sea, and never at any time to trust to it, when the winning face of calm ocean laughs treacherously; thus too if you shall once decide that certain first-beginnings are finite, different currents of matter must scatter and tumble then about through all time, so that they can never be brought into union and combine, nor abide in that union nor grow up and increase. But plain matter of fact shews that each of these results plainly takes place, that things can be brought into being and when begotten advance in growth. It is clear then that in any class you like the first-beginnings of things are infinite out of which all supplies are furnished.

Thus then neither can death-dealing motions keep the mastery always nor entomb existence for evermore, nor on the other hand can the birth and increase giving motions of things preserve things always after they are born. Thus the war of first-beginnings waged from eternity is carried on with dubious issue: now here now there the life-bringing elements of things get the mastery and are o'ermastered in turn: with the funeral wail is blended the cry which babies raise when they enter the borders

nec nox ulla diem neque noctem aurora secutast
 quae non audierit mixtos vagitibus aegris,
 ploratus mortis comites et funeris atri. 580

Illud in his obsignatum quoque rebus habere
 convenit et memori mandatum mente tenere,
 nil esse, in promptu quorum natura videtur,
 quod genere ex uno consistat principiorum,
 nec quicquam quod non permixto semine constet. 585
 et quodcumque magis vis multas possidet in se
 atque potestates, ita plurima principiorum
 in sese genera ac varias docet esse figuras.
 principio tellus habet in se corpora prima
 unde mare inmensum volventes frigora fontes 590
 adsidue renovent, habet ignes unde oriantur.
 nam multis succensa locis ardent sola terrae,
 eximiis vero furit ignibus impetus Aetnae.
 tum porro nitidas fruges arbustaque laeta
 gentibus humanis habet unde extollere possit, 595
 unde etiam fluvios frondes et pabula laeta
 montivago generi possit praebere ferarum.
 quare magna deum mater materque ferarum
 et nostri genetrix haec dicta est corporis una.

of light; and no night ever followed day nor morning night that heard not mingling with the sickly infant's cries wailings the attendants on death and black funeral.

And herein it is proper you should keep under seal and guard, there consigned, in faithful memory this truth, that there is nothing whose nature is apparent to sense, which consists of one kind of first-beginnings; nothing which is not formed by a mixing of seed. And whenever a thing possesses in itself in a greater degree many powers and properties, in that measure it shews that there are in it the greatest number of different kinds and varied shapes of first-beginnings. First of all the earth has in her first bodies out of which springs rolling coolness along replenish without fail the boundless sea, she has bodies out of which fires rise up; for in many spots the earth's crust is on fire and burns, though headstrong Aetna rages with fires of surpassing force. Then too she has bodies out of which she can raise for mankind goodly crops and joyous trees, out of which too she can supply to the mountain-ranging race of wild beasts rivers leaves and glad pastures. Wherefore she has alone been named great mother of gods and mother of beasts and parent of our body.

Hanc veteres Graium docti cecinere poetae

600

sedibus in curru biiugos agitare leones,
aeris in spatio magnam pendere docentes
tellurem neque posse in terra sistere terram.
adiunxere feras, quia quamvis effera proles
officiis debet molliri victa parentum.

605

muralique caput summum cinxere corona,
eximiis munita locis quia sustinet urbes;
quo nunc insigni per magnas praedita terras
horrifice fertur divinae matris imago.

hanc variae gentes antiquo more sacrorum
Idaeam vocitant matrem Phrygiasque catervas
dant comites, quia primum ex illis finibus edunt
per terrarum orbem fruges coepisse creari.
gallos attribuunt, quia, numen qui violarint
matris et ingrati genitoribus inventi sint,
significare volunt indignos esse putandos,
vivam progeniem qui in oras luminis edant.

610

615

tympana tenta tonant palmis et cymbala circum
concava, raucisonoque minantur cornua cantu
et Phrygio stimulat numero cava tibia mentis,
telaque praeportant violenti signa furoris,

620

Of her the old and learned poets of the Greeks have sung, that [borne aloft on high-raised] seat in a chariot she drives a pair of lions, teaching that the great earth hangs in the expanse of air and that earth cannot rest on earth. To her chariot they have yoked wild-beasts, because a brood however savage ought to be tamed and softened by the kind offices of parents. They have encircled the top of her head with a mural crown, because fortified in choice positions she sustains towns; adorned with which emblem the image of the divine mother is carried now-a-days through wide lands in awe-inspiring state. Her different nations after old-established ritual term Idean mother, and give her for escort Phrygian bands, because they tell that from those lands corn first began to be produced throughout the world. They assign her galli, because they would shew by this type that they who have done violence to the divinity of the mother and have proved ungrateful to their parents, are to be deemed unworthy to bring a living offspring into the borders of light. Tight-stretched tambourines and hollow cymbals resound all round to the stroke of their open hands, and horns menace with hoarse-sounding music, and the hollow pipe stirs their minds in Phrygian mood. They carry weapons before them, emblems of furious

ingratos animos atque impia pectora volgi
 conterrere metu quae possint numini' divae.
 ergo cum primum magnas invecta per urbis
 munificat tacita mortalis muta salute, 625
 aere atque argento sternunt iter omne viarum
 largifica stipe ditantes ninguntque rosarum
 floribus umbrantes matrem comitumque catervas.
 hic armata manus, Curetas nomine Grai
 quos memorant Phrygios, inter se forte *quod armis* 630
 ludunt in numerumque exultant sanguinolenti
 terrificas capitum quatientes numine cristas,
 Dictaeos referunt Curetas qui Iovis illum
 vagitum in Creta quondam occultasse feruntur,
 cum pueri circum puerum pernice chorea 635
 armatei in numerum pulsarent aeribus aera,
 ne Saturnus eum malis mandaret adeptus
 aeternumque daret matri sub pectore volnus.
 propterea magnam armati matrem comitantur, 640
 aut quia significant divam praedicere ut armis
 ac virtute velint patriam defendere terram
 praesidioque parent decorique parentibus esse.
 quae bene et eximie quamvis disposta ferantur,
 longe sunt tamen a vera ratione repulsa. 645

rage, meet to fill the thankless souls and godless breasts of the rabble with terror for the divinity of the goddess. Therefore when first borne in procession through great cities she mutely enriches mortals with a blessing not expressed in words, they strew all her path with brass and silver presenting her with bounteous alms, and scatter over her a snow-shower of roses, o'ershadowing the mother and her troops of attendants. Here an armed band to whom the Greeks give the name of Phrygian Curetes, in that it haply joins in the game of arms and springs up in measure all dripping with blood, shaking with its nodding the frightful crests upon the head, represents the Dictaeon Curetes who, as the story is, erst drowned in Crete that infant cry of Jove, when the young band about the young babe in rapid dance arms in hand to measured tread beat brass on brass, that Saturn might not get him to consign to his devouring jaws and stab the mother to the heart with a never-healing wound. Therefore they escort in arms the great mother, either because they mean by this sign that the goddess preaches to men to be willing with arms and valour to defend their country and be ready to be a safeguard and an ornament to their parents. All which, well and beautifully as it is set forth and told, is yet widely removed from

- omnis enim per se divom natura necessest
 immortalis aevo summa cum pace fruatur
 semota ab nostris rebus seiunctaque longe;
 nam privata dolore omni, privata periculis,
 ipsa suis pollens opibus, nil indiga nostri, 650
 nec bene promeritis capitur neque tangitur ira.
 655 hic si quis mare Neptunum Cereremque vocare
 constituit fruges et Bacchi nomine abuti
 mavolt quam laticis proprium proferre vocamen,
 concedamus ut hic terrarum dictitet orbem 655
 esse deum matrem, dum vera re tamen ipse
 680 religione animum turpi contingere parcat.
 652 terra quidem vero caret omni tempore sensu,
 et quia multarum potitur primordia rerum,
 multa modis multis effert in lumina solis. 660
 660 Saepe itaque ex uno tondentes gramina campo
 lanigerae pecudes et equorum duellica proles
 buceriaeque greges eodem sub tegmine caeli
 ex unoque sitim sedantes flumine aquai
 dissimili vivunt specie retinentque parentum 665
 665 naturam et mores generatim quaeque imitantur.
 tanta est in quovis genere herbae materiai
 dissimilis ratio, tanta est in flumine quoque.

true reason. For the nature of gods must ever in itself of necessity enjoy immortality together with supreme repose, far removed and withdrawn from our concerns; for exempt from every pain, exempt from all dangers, strong in its own resources, not wanting aught of us, it is neither gained by favours nor moved by anger. And here if any one thinks proper to call the sea Neptune and corn Ceres and chooses rather to misuse the name of Bacchus than to utter the term that belongs to that liquor, let us allow him to declare that the earth is mother of the gods, if he only forbear in earnest to stain his mind with foul religion. The earth however is at all time without feeling, and because it receives into it the first-beginnings of many things, it brings them forth in many ways into the light of the sun.

And so the woolly flocks and the martial breed of horses and horned herds, though often cropping the grass from one field beneath the same canopy of heaven and slaking their thirst from one stream of water, yet have all their life a dissimilar appearance and retain the nature of their parents and severally imitate their ways each after its kind: so great is the diversity of matter in any kind of herbage, so great in every river.

hinc porro quamvis animantem ex omnibus unam
 ossa cruor venae calor umor viscera nervi 670
 670 constituunt; quae sunt porro distantia longe,
 dissimili perfecta figura principiorum.
 tum porro quaecumque igni flammata cremantur,
 si nil praeterea, tamen haec in corpore condunt
 unde ignem iacere et lumen summittere possint 675
 675 scintillasque agere ac late differre favillam.
 cetera consimili mentis ratione peragrans
 invenies igitur multarum semina rerum
 corpore celare et varias cohibere figuras.
 denique multa vides quibus et color et sapor una 680
 681 reddita sunt cum odore. in privis pleraque dona
 haec igitur variis debent constare figuris;
 nidor enim penetrat qua fucus non it in artus,
 fucus item sorsum, *sorsum* sapor insinuatur
 sensibus; ut noscas privis differre figuris. 685
 dissimiles igitur formae glomeramen in unum
 conveniunt et res permixto semine constant.
 quin etiam passim nostris in versibus ipsis
 multa elementa vides multis communia verbis,
 cum tamen inter se versus ac verba necesse est 690

And hence too any one you please out of the whole number of living creatures is made up of bones blood veins heat moisture flesh sinews; and these things again differ widely from one another and are composed of elements of dissimilar shape. Furthermore whatever things are set on fire and burned, store up in their body, if nothing else, at least those particles, out of which they may radiate fire and send out light and make sparks fly and scatter embers all about. If you will go over all other things by a like process of reasoning, you will thus find that they conceal in their body the seeds of many things and contain elements of various shapes. Again you see many things to which are given at once both colour and taste together with smell. These properties, as there are several of them in each thing, must therefore be made up of elements of different shapes; for smell enters in where colour passes not into the frame, colour too in one way, taste in another makes its way into the senses; so that you know they differ in the particular shapes of their elements. Therefore unlike forms unite into one mass and things are made up of a mixture of seed. Throughout moreover these very verses of ours you see many elements common to many words, though yet you must admit that the verses and words one with another are different and composed of different elements; not that but few

confiteare alia ex aliis constare elementis;
 non quo multa parum communis littera currat
 aut nulla inter se duo sint ex omnibus isdem,
 sed quia non volgo paria omnibus omnia constant.
 sic aliis in rebus item communia multa 695
 multarum rerum cum sint primordia, verum
 dissimili tamen inter se consistere summa
 possunt; ut merito ex aliis constare feratur
 humanum genus et fruges arbustaque laeta.

Nec tamen omnimodis coniecti posse putandum est 700
 omnia; nam volgo fieri portenta videres,
 semiferas hominum species existere et altos
 interdum ramos eigni corpore vivo,
 multaque coniecti terrestria membra marinis,
 tum flammam taetro spirantis ore Chimaeras 705
 pascere naturam per terras omniparentis.
 quorum nil fieri manifestum est, omnia quando
 seminibus certis certa genetrice creata
 conservare genus crescentia posse videmus.
 scilicet id certa fieri ratione necessust. 710
 nam sua cuique cibus ex omnibus intus in artus
 corpora discedunt conexaque convenientis
 efficiunt motus; at contra aliena videmus

letters which are in common run through them or that no two words or verses one with another are made up entirely of the same, but because as a rule they do not all resemble one the other. Thus also though in other things there are many first-beginnings common to many things, yet they make up one with the other a quite dissimilar whole; so that men and corn and joyous trees may fairly be said to consist of different elements.

And yet we are not to suppose that all things can be joined together in all ways; for then you would see prodigies produced on all hands, forms springing up half man half beast and sometimes tall boughs sprouting from the living body, and many limbs of land-creatures joined with those of sea-animals, nature too throughout the all-bearing lands feeding chimeras which breathed flames from hideous mouth. It is plain however that nothing of the sort is done, since we see that all things produced from fixed seeds and a fixed mother can in growing preserve the marks of their kind. This you are to know must take place after a fixed law. For the particles suitable for each thing from all kinds of food when inside the body pass into the frame and joining on produce the appropriate motions; but on the other hand we see

reicere in terras naturam, multaque caecis
 corporibus fugiunt e corpore percita plagis, 715
 quae neque conecti quoquam potuere neque intus
 vitalis motus consentire atque imitari.
 sed ne forte putes animalia sola teneri
 legibus hisce, ea res ratio disternat omnis.
 nam veluti tota natura dissimiles sunt 720
 inter se genitae res quaeque, ita quamque necessest
 dissimili constare figura principiorum;
 non quo multa parum simili sint praedita forma,
 sed quia non volgo paria omnibus omnia constant.
 semina cum porro distent, differre necessust 725
 intervalla vias conexus pondera plagas
 concursus motus, quae non animalia solum
 corpora seiungunt, sed terras ac mare totum
 secernunt caelumque a terris omne retentant.
 Nunc age dicta meo dulci quaesita labore 730
 percipe, ne forte haec albis ex alba rearis
 principiis esse, ante oculos quae candida cernis,
 aut ea quae nigrant nigro de semine nata;
 nive alium quemvis quae sunt inbuta colorem,
 propterea gerere hunc credas, quod materiali 735

nature throw out on the earth those that are alien, and many things
 with their unseen bodies fly out of the body impelled by blows: those
 I mean which have not been able to join on to any part nor when
 inside to feel in unison with and adopt the vital motions. But lest you
 haply suppose that living things alone are bound by these conditions,
 such a law keeps all things within their limits. For even as things
 begotten are in their whole nature all unlike one the other, thus each
 must consist of first-beginnings of unlike shape; not that but few are
 possessed of a like form, but because as a rule all do not resemble one
 another. Again since the seeds differ, there must be a difference in the
 spaces between, the passages, the connexions, the weights, the blows, the
 clashings, the motions; all which not only disjoin living bodies, but
 hold apart the lands and the whole sea, and keep the whole heaven
 away from the earth.

Now mark, and apprehend precepts amassed by my welcome toil, lest
 haply you deem that those things which you see with your eyes to be
 bright, because white are formed of white principles, or that the things
 which are black are born from black seed; or that things which are
 steeped in any other colour, bear that colour because the bodies of

corpora consimili sint eius tincta colore.
 nullus enim color est omnino material
 corporibus, neque par rebus neque denique dispar.
 in quae corpora si nullus tibi forte videtur
 posse animi iniectus fieri, procul avius erras. 740
 nam cum caecigeni, solis qui lumina numquam
 dispexere, tamen cognoscant corpora tactu,
 744 scire licet nostrae quoque menti corpora posse
 vorti in notitiam nullo circumlita fuco.
 denique nos ipsi caecis quaecumque tenebris 745
 tangimus, haud ullo sentimus tincta colore.
 quod quoniam vinco fieri, nunc esse docebo
 743 ex ineunte aevo nullo coniuncta colore.
 749 omnis enim color omnino mutatur in omnis;
 quod facere haud ullo debent primordia pacto; 750
 immutabile enim quiddam superare necessest,
 ne res ad nilum redigantur funditus omnes.
 nam quodcumque suis mutatum finibus exit,
 continuo hoc mors est illius quod fuit ante.
 proinde colore cave contingas semina rerum, 755
 ne tibi res redeant ad nilum funditus omnes.
 Praeterea si nulla coloris principiis est
 reddita natura et variis sunt praedita formis,

matter are dyed with a colour like to it. For there is no colour at all
 to the bodies of matter, either like to the things or unlike. But if
 haply it seems to you that no impression of the mind can throw itself
 into these bodies, you wander far astray. For since men born blind
 who have never beheld the light of the sun, do yet know bodies
 by touch, you are to know that bodies can fall under the ken of our
 mind too, though stained with no colour. Again whatever things we
 ourselves touch in the thick darkness, we do not perceive to be dyed with
 any colour. And since I prove that this is the case, I will now shew
 that there are things linked to no colour from the beginning of time.
 Well any colour without any exception changes into any other; and
 this first-beginnings ought in no wise to do: something unchangeable
 must remain over, that all things be not utterly reduced to nothing.
 For whenever a thing changes and quits its proper limits, at once
 this change of state is the death of that which was before. Therefore
 mind not to dye with colour the seeds of things, that you may not have
 all things altogether returning to nothing.

Moreover if no quality of colour is assigned to first-beginnings and
 they are yet possessed of varied shapes out of which they beget colours

e quibus omne genus gignunt variantque colores
 propterea, magni quod refert semina quaeque 760
 cum quibus et quali positura contineantur
 et quos inter se dent motus accipiantque,
 perfacile extemplo rationem reddere possis
 cur ea quae nigro fuerint paulo ante colore,
 marmoreo fieri possint candore repente; 765
 ut mare, cum magni commorunt aequora venti,
 vertitur in canos candenti marmore fluctus;
 dicere enim possis, nigrum quod saepe videmus,
 materies ubi permixta est illius et ordo
 principiis mutatus et addita demptaque quaedam, 770
 continuo id fieri ut candens videatur et album.
 quod si caeruleis constarent aequora ponti
 seminibus, nullo possent albescere pacto;
 nam quocumque modo perturbes caerulea quae sint,
 numquam in marmoreum possunt migrare colorem. 775
 sin alio atque alio sunt semina tincta colore
 quae maris efficiunt unum purumque nitorem,
 ut saepe ex aliis formis variisque figuris
 efficitur quiddam quadratum unaque figura,
 conveniebat, ut in quadrato cernimus esse 780
 dissimiles formas, ita cernere in aequore ponti

of every kind and change them about by reason that it makes a great difference with what other seeds and in what position the seeds are severally held in union and what motions they mutually impart and receive, you can explain at once with the greatest ease why those things which just before were of a black colour, may become all at once of marble whiteness; as the sea, when mighty winds have stirred up its waters, is changed into white waves of the brightness of marble: you may say that when the matter of that which we often see to be black, has been mixed up anew and the arrangement of its first-beginnings has been changed and some have been added and some been taken away, the immediate result is that it appears bright and white. But if the waters of the sea consisted of azure seeds, they could in no wise become white; for however much you jumble together seeds which are azure, they can never pass into a marble colour. But if the seeds which make up the one unmixed brightness of the sea are dyed some with one, some with other colours, just as often out of different forms and varied shapes something square and of a uniform figure is made up, in that case it were natural that as we see unlike forms contained in the square, so we should see in the water of the sea or in any other one and unmixed

aut alio in quovis uno puroque nitore
dissimiles longe inter se variosque colores.
praeterea nil officiunt obstantque figurae
dissimiles quo quadratum minus omne sit extra; 785
at varii rerum inpediunt prohibentque colores
quominus esse uno possit res tota nitore.

Tum porro quae ducit et inlicit ut tribuamus
principiis rerum nonnumquam causa colores,
occidit, ex albis quoniam non alba creantur, 790
nec quae nigra cluent de nigris sed variis ex.
quippe etenim multo proclivius exorientur
candida de nullo quam nigro nata colore
aut alio quovis qui contra pugnet et obstet.

Praeterea quoniam nequeunt sine luce colores 795
esse neque in lucem existunt primordia rerum,
scire licet quam sint nullo velata colore.
qualis enim caecis poterit color esse tenebris?
lumine quin ipso mutatur propterea quod
recta aut obliqua percussus luce refulget; 800
pluma columbarum quo pacto in sole videtur,
quae sita cervices circum collumque coronat;
namque alias fit uti claro sit rubra pyropo,
interdum quodam sensu fit uti videatur

brightness colours widely unlike and different to one another. Moreover the unlike figures do not in the least hinder or prevent the whole figure from being a square on the outside; but the various colours of things are a let and hindrance to the whole things being of a uniform brightness.

Then too the reason which leads and draws us on sometimes to assign colours to the first-beginnings of things, falls to the ground, since white things are not produced from white, nor those which are black from black, but out of things of various colours. For white things will much more readily rise up and be born from no colour than from a white or any other colour which thwarts and opposes it.

Moreover since colours cannot exist without light and first-beginnings of things do not come out into the light, you may be sure they are clothed with no colour. For what colour can there be in total darkness? nay it changes in the light itself according as its brightness comes from a straight or slanting stroke of light. After this fashion the down which encircles and crowns the nape and throat of doves shews itself in the sun: at one time it is ruddy with the hue of bright pyropus; at another it appears by a certain way of looking at it to

inter curalium viridis miscere zmaragdos. 805
 caudaque pavonis, larga cum luce repleta est,
 consimili mutat ratione obversa colores;
 qui quoniam quodam gignuntur luminis ictu,
 scire licet, sine eo fieri non posse putandum est.
 et quoniam plagae quoddam genus excipit in se 810
 pupula, cum sentire colorem dicitur album,
 atque aliud porro, nigrum cum et cetera sentit,
 nec refert ea quae tangas quo forte colore
 praedita sint, verum quali magis apta figura,
 scire licet nil principii opus esse colores, 815
 sed variis formis variantes edere tactus.

Praeterea quoniam non certis certa figuris
 est natura coloris et omnia principiorum
 formamenta queunt in quovis esse nitore,
 cur ea quae constant ex illis non pariter sunt 820
 omne genus perfusa coloribus in genere omni?
 conveniebat enim corvos quoque saepe volantis
 ex albis album pinnis iactare colorem,
 et nigros fieri nigro de semine cycnos
 aut alio quovis uno varioque colore. 825

Quin etiam quanto in partes res quaeque minutas

blend with coral-red green emeralds. The tail of the peacock when it is saturated with abundant light, changes in like fashion its colours as it faces the sun. And since these colours are begotten by a certain stroke of light, sure enough you must believe that they cannot be produced without it. And since the pupil receives into it a kind of blow, when it is said to perceive a white colour, and then another, when it perceives black or any other colour, and since it is of no moment with what colour the things which you touch are provided, but rather with what sort of shape they are furnished, you are to know that first-beginnings have no need of colours, but give forth sensations of touch varying according to their various shapes.

Moreover since no particular kind of colour is assigned to particular shapes and every configuration of first-beginnings can exist in any colour, why on a like principle are not the things which are formed out of them in every kind o'erlaid with colours of every kind? For then it were natural that crows too in flying should display a white colour from white wings and that swans should come to be black from a black seed, or of any other colour you please, uniform or diversified.

Again the more minute the parts are into which anything is rent,

distrahitur magis, hoc magis est ut cernere possis
 evanescere paulatim stinguique colorem;
 ut fit ubi in parvas partis discerpitur austrum:
 purpura poeniceusque color clarissimu' multo, 830
 filatim cum distractum est, dispergitur omnis;
 noscere ut hinc possis prius omnem efflare colorem
 particulas quam discedant ad semina rerum.

Postremo quoniam non omnia corpora vocem
 mittere concedis neque odorem, propterea fit 835
 ut non omnibus adtribuas sonitus et odores.
 sic oculis quoniam non omnia cernere quimus,
 scire licet quaedam tam constare orba colore
 quam sine odore ullo quaedam sonituque remota,
 nec minus haec animum cognoscere posse sagacem 840
 quam quae sunt aliis rebus privata notare.

Sed ne forte putes solo spoliata colore
 corpora prima manere, etiam secreta teporis
 sunt ac frigoris omnino calidique vaporis,
 et sonitu sterila et suco ieiuna feruntur, 845
 nec iaciunt ullum proprium de corpore odorem.
 sicut amaracini blandum stactaeque liquorem
 et nardi florem, nectar qui naribus halat,

the more you may perceive the colours fade away by little and little and become extinct; as for instance if a piece of purple is torn into small shreds: when it has been plucked into separate threads, the purple and the scarlet far the most brilliant of colours are quite effaced; from which you may infer that the shreds part with all their colour before they come back to the seeds of things.

Lastly since you admit that all bodies do not utter a voice nor emit a smell, for this reason you do not assign to all sounds and smells. So also since we cannot perceive all things with the eye, you are to know that some things are as much denuded of colour as others are without smell and devoid of sound, and that the keen-discerning mind can just as well apprehend these things as it can take note of things which are destitute of other qualities.

But lest haply you suppose that first bodies remain stripped of colour alone, they are also wholly devoid of warmth and cold and violent heat, and are judged to be barren of sound and drained of moisture, and emit from their body no scent of their own. Just as when you set about preparing the balmy liquid of sweet marjoram and myrrh and the flower of spikenard which gives forth to the nostrils a

cum facere instituas, cum primis quaerere par est,
 quoad licet ac possis reperire, inolentis olivi 850
 naturam, nullam quae mittat naribus auram,
 quam minime ut possit mixtos in corpore odores
 concoctosque suo contractans perdere viro,
 propter eandem *rem* debent primordia rerum
 non adhibere suum gignundis rebus odorem 855
 nec sonitum, quoniam nil ab se mittere possunt,
 nec simili ratione saporem denique quemquam
 nec frigus neque item calidum tepidumque vaporem,
 cetera; quae cum ita sunt tamen ut mortalia constent,
 molli lenta, fragosa putri, cava corpore raro, 860
 omnia sint a principiis seiuncta necessest,
 immortalia si volumus subiungere rebus
 fundamenta quibus nitatur summa salutis;
 ne tibi res redeant ad nilum funditus omnes.

Nunc ea quae sentire videmus cumque necessest 865
 ex insensilibus tamen omnia confiteare
 principiis constare. neque id manifesta refutant
 nec contra pugnant, in promptu cognita quae sunt,
 sed magis ipsa manu ducunt et credere cogunt
 ex insensilibus, quod dico, animalia gigni. 870

scent like nectar, before all you should seek, so far as you may and can find it, the substance of scentless oil, such as gives out no perfume to the nostrils, that it may as little as possible meddle with and destroy by its own pungency the odours mixed in its body and boiled up with it; for the same reason the first-beginnings of things must not bring to the begetting of things a smell or sound of their own, since they cannot discharge anything from themselves, and for the same reason no taste either nor cold nor any heat moderate or violent, and the like. For as these things, be they what they may, are still liable to death, whether pliant with a soft, brittle with a crumbling, or hollow with a porous body, they must all be withdrawn from the first-beginnings, if we wish to assign to things imperishable foundations for the whole sum of existence to rest upon: that you may not have things returning altogether to nothing.

To come to another point, whatever things we perceive to have sense, you must yet admit to be all composed of senseless first-beginnings: manifest tokens which are open to all to apprehend, so far from refuting or contradicting, do rather themselves take us by the hand and constrain us to believe that, as I say, living things are begotten

quippe videre licet vivos existere vermes
 stercore de taetro, putorem cum sibi nacta est
 intempestivis ex imbribus umida tellus ;
 praeterea cunctas itidem res vertere sese.
 vertunt se fluvii frondes et pabula laeta 875
 in pecudes, vertunt pecudes in corpora nostra
 naturam, et nostro de corpore saepe ferarum
 augescunt vires et corpora pennipotentum.
 ergo omnes natura cibos in corpora viva
 vertit et hinc sensus animantium procreat omnes. 880
 non alia longe ratione adque arida ligna
 explicat in flammis et in ignis omnia versat.
 iamne vides igitur magni primordia rerum
 referre in quali sint ordine quaeque locata
 et commixta quibus dent motus accipiantque? 885
 Tum porro quid id est, animum quod percutit, ipsum
 quod movet et varios sensus expromere cogit,
 ex insensilibus ne credas sensile gigni?
 nimirum lapides et ligna et terra quod una
 mixta tamen nequeunt vitalem reddere sensum. 890
 illud in his igitur rebus meminisse decebit,
 non ex omnibus omnino, quaecumque creant res,
 sensile et extemplo me gigni dicere sensus,

from senseless things. We may see in fact living worms spring out of stinking dung, when the soaked earth has gotten putridity after excessive rains; and all things besides change in the same way: rivers leaves and glad pastures change into cattle, cattle change their substance into our bodies, and often out of these the powers of wild beasts and the bodies of the strong of wing are increased. Therefore nature changes all foods into living bodies and engenders out of them all the senses of living creatures, much in the same way as she dissolves dry woods into flames and converts all things into fires. Now do you see that it is of great moment in what sort of arrangement the first-beginnings of things are severally placed and with what others they are mixed up, when they impart and receive motions?

Then again what is that which strikes your mind, which affects that mind and constrains it to give utterance to many different thoughts, to save you from believing that the sensible is begotten out of senseless things? Sure enough it is because stones and wood and earth however mixed together are yet unable to produce vital sense. This therefore it will be proper to remember herein, that I do not assert that the sensible and sensations are forthwith begotten out of all things without ex-

sed magni referre ea primum quantula constent,
 sensile quae faciunt, et qua sint praedita forma, 895
 motibus ordinibus posituris denique quae sint.
 quarum nil rerum in lignis glaebisque videmus;
 et tamen haec, cum sunt quasi putrefacta per imbres,
 vermiculos pariunt, quia corpora material
 antiquis ex ordinibus permota nova re 900
 conciliantur ita ut debent animalia gigni.
 deinde ea, sensilibus qui sensile posse creari
 constituunt porro ex aliis, sentire suëta
 mollia iam faciunt. nam sensus iungitur omnis
 visceribus nervis venis, quae cuique videmus 905
 mollia mortali consistere corpore creta.
 sed tamen esto iam posse haec aeterna manere:
 nempe tamen debent aut sensum partis habere
 aut simili totis animalibus esse putari.
 at nequeant per se partes sentire necesse est; 910
 namque alio sensus membrorum respicit omnis,
 nec manus a nobis potis est secreta neque ulla
 corporis omnino sensum pars sola tenere.
 linquitur ut totis animantibus adsimulentur.
 923 sic itidem quae sentimus sentire necessest, 915

ception which produce things; but that it is of great moment first how minute the particles are which make up the sensible thing and then what shape they possess and what in short they are in their motions arrangements positions. None of which requisites we find in woods and clods; and yet even these things, when they have so to speak become rotten through the rains, bring forth worms, because bodies of matter driven from their ancient arrangements by a new condition are combined in the same way as when living creatures are to be begotten. Next they who hold that the sensible can be produced anew out of other sensible things, in that case suppose those things, accustomed thus to have sense, to be soft; for all sense is bound up with flesh sinews veins; which in everything we see to be soft and formed of a mortal body. But even suppose that these things can remain eternal: they must yet I presume either have the sense of some part or else be supposed to possess a sense similar to the entire living creatures. But the parts cannot possibly have sense by themselves alone; for all sense of the different members has reference to something else; nor can the hand when severed from us nor any other part of the body whatever by itself maintain sensation. It remains to assume that they resemble the entire living creatures. In this case it is necessary that they should

- 915 vitali ut possint consentire undique sensu.
 qui poterunt igitur rerum primordia dici
 et leti vitare vias, animalia cum sint,
 adque animalia *sint* mortalibus una eademque?
 quod tamen ut possint, at coetu concilioque 920
 920 nil facient praeter volgum turbamque animantum,
 scilicet ut nequeant homines armenta feraeque
 inter sese ullam rem gignere conveniundo.
 924 quod si forte suum dimittunt corpore sensum
 atque alium capiunt, quid opus fuit adtribui id quod 925
 detrahitur? tum praeterea, quo fugimus ante,
 quatenus in pullos animalis vertier ova
 cernimus alituum vermisque effervere, terram
 intempestivos quom putor cepit ob imbris,
 scire licet gigni posse ex non sensibu' sensus. 930
 Quod si forte aliquis dicet dumtaxat oriri
 posse a non sensu sensum mutabilitate,
 aut alio tamquam partu quod proditus extet,
 huic satis illud erit planum facere atque probare
 non fieri partum nisi concilio ante coacto 935
 nec quicquam commutari sine conciliatu.

feel the things which we feel in the same way as we do, in order that they may be able on all hands to work in concert with the vital sense. How then can they be called first-beginnings of things and shun the paths of death, seeing that they are living things, and that living things are one and the same with mortal things? Nay granting they could do this, yet by their meeting and union they will make nothing but a jumble and medley of living things; just you are to know as men cattle and wild-beasts would be unable to beget any other thing by all their mixing with one another. But if haply they lose from their body their own sense and adopt another, what use to assign what is again withdrawn? moreover, the instance to which we had before recourse, inasmuch as we see the eggs of fowls change into living chicks and worms burst forth, when putridity has seized on the earth after excessive rains, you are to know that sensations can be begotten out of no-sensations.

But if haply any one shall say that sense so far may arise from no-sensation by a process of change, or because it is brought forth by a kind of birth, it will be enough to make plain and to prove to him that no birth takes place until a union of elements has first been effected, and that nothing changes without such a process of uniting. Above all

principio nequeunt ullius corporis esse
 sensus ante ipsam genitam naturam animantis,
 nimirum quia materies disiecta tenetur
 aere fluminibus terris terraque creatis, 940
 nec congressa modo vitalis convenienti
 contulit inter se motus, quibus omnituentes
 accensi sensus animante in quaque cientur.

Praeterea quamvis animantem grandior ictus,
 quam patitur natura, repente adfligit et omnis 945
 corporis atque animi pergit confundere sensus.
 dissoluuntur enim positurae principiorum
 et penitus motus vitales inpediuntur,
 donec materies, omnis concussa per artus,
 vitalis animae nodos a corpore solvit 950
 dispersamque foras per caulas eiecit omnis.
 nam quid praeterea facere ictum posse reamur
 oblatum, nisi discutere ac dissolvere quaeque?
 fit quoque uti soleant minus oblato acriter ictu
 reliqui motus vitalis vincere saepe, 955
 vincere, et ingentis plagae sedare tumultus
 inque suos quicquid rursus revocare meatus
 et quasi iam leti dominantem in corpore motum
 discutere ac paene amissos accendere sensus.

senses cannot exist in any body before the nature itself of the living things has been begotten, because sure enough the matter remains scattered about in air rivers earth and things produced from earth, and has not met together and combined in appropriate fashion the vital motions by which the all-discerning senses are kindled into action in each living thing.

Again a blow more severe than its nature can endure, prostrates at once any living thing and goes on to stun all the senses of body and mind. For the positions of the first-beginnings are broken up and the vital motions entirely stopped, until the matter, disordered by the shock through the whole frame, unties from the body the vital fastenings of the soul and scatters it abroad and forces it out through all the pores. For what more can we suppose the infliction of a blow can do, than shake from their place and break up the union of the several elements? Often too when the blow is inflicted with less violence the remaining vital motions are wont to prevail, to prevail I say and still the huge disorders caused by the blow and recall each part into its proper channels and shake off the motion of death now reigning as it were paramount in the body and kindle afresh the almost lost senses.

nam qua re potius leti iam limine ab ipso 960
ad vitam possit conlecta mente reverti,
quam quo decursum prope iam siet ire et abire?

Praeterea quoniam dolor est ubi materialia
corpora vi quadam per viscera viva per artus
sollicitata suis trepidant in sedibus intus, 965
inque locum quando remigrant, fit blanda voluptas,
scire licet nullo primordia posse dolore
temptari nullamque voluptatem capere ex se;
quandoquidem non sunt ex ullis principiorum
corporibus, quorum motus novitate laborent 970
aut aliquem fructum capiant dulcedinis almae.
haut igitur debent esse ullo praedita sensu.

Denique uti possint sentire animalia quaeque,
principiis si iam est sensus tribuendus eorum,
quid, genus humanum proprium de quibus factumst? 975
scilicet et risu tremulo concussa cachinnant
et lacrimis spargunt rorantibus ora genasque
multaque de rerum mixtura dicere callent
et sibi proporro quae sint primordia quaerunt;
quandoquidem totis mortalibus adsimulata 980
ipsa quoque ex aliis debent constare elementis,

For in what other way should the thing be able to gather together its powers of mind and come back to life from the very threshold of death rather than pass on to the goal to which it had almost run and so pass away?

Again since there is pain when the bodies of matter are disordered by any force throughout the living flesh and frame and quake in their seats within, and as when they travel back into their place, a soothing pleasure ensues, you are to know that first-beginnings can be assailed by no pain and can derive no pleasure from themselves; since they are not formed of any bodies of first-beginnings, so as to be distressed by any novelty in their motions or derive from it any fruit of fostering delight; and therefore they must not be possessed of any sense.

Again if in order that living creatures may severally have sense, sense is to be assigned to their first-beginnings as well, what are we to say of those of which mankind is specifically made? sure enough they burst into fits of shaking laughter and sprinkle with dewy tears face and cheeks and have the cunning to speak at length on the nature of things and enquire next what their own first-beginnings are; since like in their natures to the entire mortals they must in their turn be formed out of other elements, then those others out of others, so that you can venture

inde alia ex aliis, nusquam consistere ut ausis :
 quippe sequar, quodcumque loqui ridereque dices
 et sapere, ex aliis eadem haec facientibus ut sit.
 quod si delira haec furiosaque cernimus esse 985
 et ridere potest non ex ridentibu' factus
 et sapere et doctis rationem reddere dictis
 non ex seminibus sapientibus atque disertis,
 qui minus esse queant ea quae sentire videmus
 seminibus permixta carentibus undique sensu? 990

Denique caelesti sumus omnes semine oriundi;
 omnibus ille idem pater est, unde alma liquentis
 umoris guttas mater cum terra recepit,
 feta parit nitidas fruges arbustaque laeta
 et genus humanum, parit omnia saecula ferarum, 995
 pabula cum praebet quibus omnes corpora pascunt
 et dulcem ducunt vitam prolemque propagant;
 quapropter merito maternum nomen adepta est.
 cedit item retro, de terra quod fuit ante,
 in terras, et quod missumst ex aetheris oris, 1000
 id rursum caeli rellatum templa receptant.
 nec sic interemit mors res ut materiali
 corpora conficiat, sed coetum dissupat ollis,

nowhere to come to a stop: yes whatever you shall say speaks and laughs and thinks, I will press you with the argument that it is formed of other things performing these same acts. But if we see these notions to be sheer folly and madness, and a man may laugh though not made of laughing things, and think and reason in learned language though not formed of thoughtful and eloquent seeds, why cannot the things which we see to have sense be made up of a mixture of things altogether devoid of sense?

Again we are all sprung from a heavenly seed, all have that same father, by whom mother earth the giver of increase, when she has taken in from him liquid drops of moisture, conceives and bears goodly crops and joyous trees and the race of man, bears all kinds of brute beasts, in that she supplies food with which all feed their bodies and lead a pleasant life and continue their race; wherefore with good cause she has gotten the name of mother. That also which before was from the earth, passes back into the earth, and that which was sent from the borders of ether, is carried back and taken in again by the quarters of heaven. Death does not extinguish things in such a way as to destroy the bodies of matter, but only breaks up the union amongst them, and then

inde aliis aliud coniungit; et effit ut omnes
 res ita convertant formas mutantque colores 1005
 et capiant sensus et puncto tempore reddant;
 ut noscas referre eadem primordia rerum
 cum quibus et quali positura contineantur
 et quos inter se dent motus accipiantque,
 neve putes aeterna penes residere potesse 1010
 corpora prima quod in summis fluitare videmus
 rebus et interdum nasci subitoque perire.
 quin etiam refert nostris in versibus ipsis
 cum quibus et quali sint ordine quaeque locata.
 si non omnia sunt, at multo maxima pars est 1017
 consimilis; verum positura discrepitant res.
 sic ipsis in rebus item iam material
 concursus motus ordo positura figurae 1021
 cum permutantur, mutari res quoque debent.

Nunc animum nobis adhibe veram ad rationem.
 nam tibi vehementer nova res molitur ad auris
 accedere et nova se species ostendere rerum. 1025
 sed neque tam facilis res ulla est quin ea primum
 difficilis magis ad credendum constet, itemque
 nil adeo magnum neque tam mirabile quicquam,

joins anew the different elements with others; and thus it comes to pass that all things change their shapes and alter their colours and receive sensations and in a moment yield them up; so that from all this you may know it matters much with what others and in what position the same first-beginnings of things are held in union and what motions they do mutually impart and receive, and you must not suppose that that which we see floating about on the surface of things and now born, then at once perishing, can be a property inherent in everlasting first bodies. Moreover in our verses themselves it matters much with what other elements and in what kind of order the several elements are placed. If not all, yet by far the greatest number are alike; but the totals composed of them are made to differ by the position of these elements. Thus in actual things as well when the clashing motions arrangement position shapes of matter change about, the things also must change.

Apply now, we entreat, your mind to true reason. For a new question struggles earnestly to gain your ears, a new aspect of things to display itself. But there is nothing so easy as not to be at first more difficult to believe than afterwards; and nothing too so great, so marvel-

quod non paulatim minuant mirarier omnes.
 suspicito caeli clarum purumque colorem, 1030
 quaeque in se cohibet, palantia sidera passim,
 lunamque et solis praeclara luce nitorem ;
 omnia quae nunc si primum mortalibus essent,
 ex inproviso si nunc obiecta repente,
 quid magis his rebus poterat mirabile dici 1035
 aut minus ante quod auderent fore credere gentes ?
 nil, ut opinor : ita haec species miranda fuisset.
 quam tibi iam nemo, fessus satiate videndi,
 suspicere in caeli dignatur lucida templa !
 desine quapropter novitate exterritus ipsa 1040
 expuere ex animo rationem, sed magis acri
 iudicio perpende et, si tibi vera videntur,
 dede manus, aut, si falsum est, accingere contra.
 quaerit enim rationem animus, cum summa loci sit
 infinita foris haec extra moenia mundi, 1045
 quid sit ibi porro quo prospicere usque velit mens
 atque animi iactus liber quo pervolet ipse.
 Principio nobis in cunctas undique partis
 et latere ex utroque *supra* supterque per omne
 nulla est finis ; uti docui, res ipsaque per se 1050

lous, that all do not gradually lessen their admiration of it. Look up at the bright and unsullied hue of heaven and the stars which it holds within it, wandering all about, and the moon and the sun's light of dazzling brilliancy : if all these things were now for the first time, if I say they were now suddenly presented to mortals beyond all expectation, what could have been named that would be more marvellous than these things, or that nations beforehand would less venture to believe could be? nothing, methinks : so wondrous strange had been this sight. Yet how little, you know, wearied as all are to satiety with seeing, any one now cares to look up into heaven's glittering quarters ! Cease therefore to be dismayed by the mere novelty and so to reject reason from your mind with loathing : weigh the questions rather with keen judgment and if they seem to you to be true, surrender, or if the thing is false, gird yourself to the encounter. For since the sum of space is unlimited outside beyond these walls of the world, the mind seeks to apprehend what there is yonder there, to which the spirit ever yearns to look forward, and to which the mind's immission reaches in free and unembarrassed flight.

In the first place we see that round in all directions, about above and underneath, throughout the universe there is no bound, as I have

vociferatur, et elucet natura profundi.
 nullo iam pacto veri simile esse putandumst,
 undique cum vorsum spatium vacet infinitum
 seminaque innumero numero summaque profunda
 multimodis volitent aeterno percita motu, 1055
 hunc unum terrarum orbem caelumque creatum,
 nil agere illa foris tot corpora materiai;
 cum praesertim hic sit natura factus, et ipsa
 sponte sua forte offensando semina rerum
 multimodis temere incassum frustra coacta 1060
 tandem coluerint ea quae coniecta repente
 magnarum rerum fierent exordia semper,
 terrai maris et caeli generisque animantum.
 quare etiam atque etiam talis fateare necesse est
 esse alios alibi congressus materiai, 1065
 qualis hic est, avido complexu quem tenet aether.
 Praeterea cum materies est multa parata,
 cum locus est praesto nec res nec causa moratur
 ulla, geri debent nimirum et confieri res.
 nunc et seminibus si tanta est copia quantam 1070
 enumerare aetas animantum non queat omnis,
 visque eadem *et* natura manet quae semina rerum

shewn and as the thing of itself proclaims with loud voice and as clearly
 shines out in the nature of bottomless space. In no wise then can it be
 deemed probable, when space yawns illimitable towards all points and
 seeds in number numberless and sum unfathomable fly about in manifold
 ways driven on in ceaseless motion, that this single earth and heaven
 have been brought into being, that those bodies of matter so many in
 number do nothing outside them; the more so that this world has been
 made by nature, and the seeds of things chancing spontaneously to clash,
 after being brought together in manifold wise without purpose, without
 foresight, without result, have at last combined in such masses as, sud-
 denly thrown together, became on each occasion the rudiments of great
 things of earth sea and heaven and the race of living things. Wherefore
 again and again I say you must admit that there are elsewhere other
 combinations of matter like to this which ether holds in its greedy
 grasp.

Again when much matter is at hand, when room is there and there
 is no thing, no cause to hinder, things sure enough must go on and
 be completed. Well then if on the one hand there is so great a store of
 seeds as the whole life of living creatures cannot reckon up, and if the
 same force and nature abide in them and have the power to throw the

conicere in loca quaeque queat simili ratione
 atque huc sunt coniecta, necesse est confiteare
 esse alios aliis terrarum in partibus orbis 1075
 et varias hominum gentis et saecula ferarum.

Huc accedit ut in summa res nulla sit una,
 unica quae gignatur et unica solaque crescat,
 quin aliquoiu' siet saeculi permultaque eodem
 sint genere. in primis animalibus, inclute Memmi, 1080
 invenies sic montivagum genus esse ferarum,
 sic hominum genitam prolem, sic denique mutas
 squamigerum pecudes et corpora cuncta volantum.
 quapropter caelum simili ratione fatendumst
 terramque et solem lunam mare, cetera quae sunt, 1085
 non esse unica, sed numero magis innumerali;
 quandoquidem vitae depactus terminus alte
 tam manet haec et tam nativo corpore constant,
 quam genus omne quod hic generatimst rebus abundans.

Quae bene cognita si teneas, natura videtur 1090
 libera continuo dominis privata superbis
 ipsa sua per se sponte omnia dis agere expers.
 nam pro sancta deum tranquilla pectora pace
 quae placidum degunt aevom vitamque serenam,

seeds of things together into their several places in the same way as they are thrown together into our world, you must admit that in other parts of space there are other earths and various races of men and kinds of wild beasts.

Moreover in the sum of all there is no one thing which is begotten single in its kind and grows up single and sole of its kind; but a thing always belongs to some class and there are many other things in the same kind. First in the case of living things, most noble Memmius, you will find that in this sort has been begotten the mountain-ranging race of wild beasts, in this sort the breed of men, in this sort too the mute shoals of scaly creatures and all bodies of fowls. Wherefore on a like principle you must admit that earth and sun moon sea and all things else that are, are not single in their kind, but rather of a number past numbering; since the deep-set boundary-mark of life just as much awaits these and they are just as much of a body that had birth, as any class of things which here on earth abounds in samples of its kind.

If you well apprehend and keep in mind these things, nature free at once and rid of her haughty lords is seen to do all things spontaneously of herself without the meddling of the gods. For I appeal to the holy breasts of the gods who in tranquil peace pass a calm time and an un-

quis regere immensi summam, quis habere profundi 1095
 indu manu validas potis est moderanter habenas,
 quis pariter caelos omnis convertere et omnis
 ignibus aetheriis terras suffire feracis,
 omnibus inve locis esse omni tempore praesto,
 nubibus ut tenebras faciat caelique serena 1100
 concutiat sonitu, tum fulmina mittat et aedis
 saepe suas disturbet et *in* deserta recedens
 saeviat exercens telum quod saepe nocentes
 praeterit exanimatque indignos inque merentes?

Multaque post mundi tempus genitale diemque 1105
 primigenum maris et terrae solisque coortum
 addita corpora sunt extrinsecus, addita circum
 semina quae magnum iaculando contulit omne;
 unde mare et terrae possent augescere et unde
 appareret spatium caeli domus altaque tecta 1110
 tolleret a terris procul et consurgeret aer.
 nam sua cuique locis ex omnibus omnia plagis
 corpora distribuuntur et ad sua saecula recedunt,
 umor ad umorem, terreno corpore terra
 crescit et ignem ignes procidunt aetheraque *aether*, 1115
 donique ad extremam crescendi perfica finem

ruffled existence, who can rule the sun, who hold in his hand with
 controlling force the strong reins of the immeasurable deep? who can
 at once make all the different heavens to roll and warm with ethereal
 fires all the fruitful earths, or be present in all places at all times, to
 bring darkness with clouds and shake with noise the heaven's serene
 expanse, to hurl lightnings and often throw down his own temples and
 withdrawing into the deserts there to spend his rage in practising his
 bolt which often passes the guilty by and strikes dead the innocent and
 unoffending?

And since the birth-time of the world and first day of being to sea
 and earth and the formation of the sun many bodies have been added
 from without, many seeds added all round, which the great universe in
 tossing to and fro has contributed; that from them the sea and lands
 might increase and from them heaven's mansion might enlarge its
 expanse and raise its high vaults far above earth, and that air might
 rise up around. For all bodies from all quarters are assigned by blows
 each to its appropriate thing and all withdraw to their proper classes;
 moisture passes to moisture, from an earthy body earth increases and
 fires forge fires and ether ether, until nature parent of things with
 finishing hand has brought all things on to their utmost limit of growth.

omnia perduxit rerum natura creatrix;
 ut fit ubi nilo iam plus est quod datur intra
 vitalis venas quam quod fluit adque recedit.
 omnibus hic aetas debet consistere rebus, 1120
 hic natura suis refrenat viribus auctum.
 nam quaecumque vides hilaro grandescere adauctu
 paulatimque gradus aetatis scandere adultae,
 plura sibi adsumunt quam de se corpora mittunt,
 dum facile in venas cibus omnis inditur et dum 1125
 non ita sunt late dispessa ut multa remittant
 et plus dispendi faciant quam vescitur aetas.
 nam certe fluere adque recedere corpora rebus
 multa manus dandum est; sed plura accedere debent,
 donec alescendi summum tetigere cacumen. 1130
 inde minutatim vires et robur adultum
 frangit et in partem peiorem liquitur aetas.
 quippe etenim quanto est res amplior, augmine adempto,
 et quo latior est, in cunctas undique partis
 plura modo dispargit et ab se corpora mittit, 1135
 nec facile in venas cibus omnis diditur ei
 nec satis est proquam largos exaestuat aestus,
 unde queat tantum suboriri ac subpeditare.
 1146 omnia debet enim cibus integrare novando

And this comes to pass when that which is infused into the life-arteries is no more than that which ebbs from them and withdraws: at this point the life-growth in all things must stop, at this point nature by her powers checks further increase. For whatever things you see grow in size with joyous increase and mount by successive steps to mature age, take to themselves more bodies than they discharge from themselves, while food is readily infused into all the arteries and the things are not so widely spread out as to throw off many particles and occasion more waste than their age can take in as nourishment. For no doubt it must be conceded that many bodies ebb away and withdraw from things; but still more must join them, until they have touched the utmost point of growth. Then piece by piece age breaks their powers and matured strength and wastes away on the side of decay. For the larger a thing is and the wider, as soon as its growth is stopped, at once it sheds abroad and discharges from it more bodies in all directions round; and its food is not readily transmitted into all its arteries and is not enough, in proportion to the copious exhalations which the thing throws off, to enable a like amount to rise up and be supplied. For food must

- et fulcire cibus, *cibus* omnia sustentare, 1140
 nequiquam, quoniam nec venae perpetiuntur
 quod satis est neque quantum opus est natura ministrat.
- 1139 iūre igitur pereunt, cum rarefacta fluendo
 sunt et cum externis succumbunt omnia plagis,
 quandoquidem grandi cibus aevo denique deficit 1145
 nec tuditantia rem cessant extrinsecus ullam
 corpora conficere et plagis infesta domare.
 sic igitur magni quoque circum moenia mundi
- 1145 expugnata dabunt labem putrisque ruinas.
 iamque adeo fracta est aetas effetaque tellus 1150
 vix animalia parva creat quae cuncta creavit
 saecula deditque ferarum ingentia corpora partu.
 haud, ut opinor, enim mortalia saecula superne
 aurea de caelo demisit funis in arva
 nec mare nec fluctus plangentis saxa crearunt, 1155
 sed genuit tellus eadem quae nunc alit ex se.
 praeterea nitidas fruges vinetaque laeta
 sponte sua primum mortalibus ipsa creavit,
 ipsa dedit dulcis fetus et pabula laeta;
 quae nunc vix nostro grandescunt aucta labore, 1160
 conterimusque boves et viris agricolarum,
 conficimus ferrum vix arvis suppeditati:

keep all things entire by renewing them, food must uphold, food sustain all things: all in vain, since the arteries refuse to hold what is sufficient, and nature does not furnish the needful amount. With good reason therefore all things perish, when they have been rarefied by the ebb of particles and succumb to blows from without, since food sooner or later fails advanced age, and bodies never cease to destroy a thing by thumping it from without and to overpower it by aggressive blows. In this way then the walls too of the great world around shall be stormed and fall to decay and crumbling ruin. Yes and even now the age is enfeebled and the earth exhausted by bearing scarce produces little living creatures, she who produced all races and gave birth to the huge bodies of wild beasts. For methinks no golden chain let down to earth from heaven above the races of mortal beings, nor did the sea and waves which lash the rocks produce them, but the same earth bare them which now feeds them from herself. Moreover she first spontaneously of herself produced for mortals goodly corn-crops and joyous vineyards; of herself gave sweet fruits and joyous pastures; which now-a-days scarce attain any size when furthered by our labour: we exhaust the oxen and the strength of the husbandmen; we wear out our iron, scarce equal to the

- usque adeo parcunt fetus augentque labore.
 iamque caput quassans grandis suspirat arator
 crebrius, incassum manuum cecidisse labores, 1165
 et cum tempora temporibus praesentia confert
 praeteritis, laudat fortunas saepe parentis
 1170 et crepat, anticum genus ut pietate repletum
 perfacile angustis tolerarit finibus aevom,
 cum minor esset agri multo modus ante viritim. 1170
 1168 tristis item vetulae vitis sator atque *vietae*
 temporis incusat momen caelumque fatigat
 1173 nec tenet omnia paulatim tabescere et ire
 ad capulum spatio aetatis defessa vetusto.

tillage of the fields; so niggardly are they of their produce and after so much labour do they let them grow. And now the aged ploughman shakes his head and sighs again and again to think that the labours of his hand have come to nothing; and when he compares present times with times past, he often praises the fortunes of his sire and harps on the theme, how the men of old comfortably supported life on a scanty plot of ground, since the allotment of land to each man was far less of yore than now. The sorrowful planter too of the exhausted and shrivelled vine impeaches the march of time and wearies heaven, and comprehends not that all things are gradually wasting away and passing to the grave, quite forespent by age and length of days.

T. LUCRETI CARI
DE RERUM NATURA

LIBER TERTIUS

E tenebris tantis tam clarum extollere lumen
qui primus potuisti inlustrans commoda vitae,
te sequor, o Graiae gentis decus, inque tuis nunc
ficta pedum pono pressis vestigia signis,
non ita certandi cupidus quam propter amorem 5
quod te imitari aveo; quid enim contendat hirundo
cycnis, aut quidnam tremulis facere artibus haedi
consimile in cursu possint et fortis equi vis?
tu, pater, es, rerum inventor, tu patria nobis
suppeditas praecepta, tuisque ex, inclute, chartis, 10
floriferis ut apes in saltibus omnia libant,
omnia nos itidem depascimur aurea dicta,
aurea, perpetua semper dignissima vita.
nam simul ac ratio tua coepit vociferari
naturam rerum, divina mente coorta, 15

Thee, who first wast able from amid such thick darkness to raise on high so bright a beacon and shed a light on the true interests of life, thee I follow, glory of the Greek race, and plant now my footsteps firmly fixed in thy imprinted marks, not so much from a desire to rival thee as that from the love I bear thee I yearn to imitate thee; for why need the swallow contend with swans, or what likeness is there between the feats of racing performed by kids with tottering limbs and by the powerful strength of the horse? Thou, father, art discoverer of things, thou fur- nishest us with fatherly precepts, and like as bees sip of all things in the flowery lawns, we, o glorious being, in like manner feed from out thy pages upon all the golden maxims, golden I say, most worthy ever of endless life. For soon as thy philosophy issuing from a godlike in- tellect has begun with loud voice to proclaim the nature of things, the

diffugiunt animi terrores, moenia mundi
 discedunt, totum video per inane geri res.
 apparet divum numen sedesque quietae
 quas neque concutiunt venti nec nubila nimbis
 aspergunt neque nix acri concreta pruina 20
 cana cadens violat semperque innubilus aether
 integit, et large diffuso lumine rident.
 omnia suppetitat porro natura neque ulla
 res animi pacem delibat tempore in ullo.
 at contra nusquam apparent Acherusia templa 25
 nec tellus obstat quin omnia dispiciantur,
 sub pedibus quaecumque infra per inane geruntur.
 his ibi me rebus quaedam divina voluptas
 percipit adque horror, quod sic natura tua vi
 tam manifesta patens ex omni parte relecta est. 30

Et quoniam docui cunctarum exordia rerum
 qualia sint et quam variis distantia formis
 sponte sua volitent aeterno percita motu
 quove modo possint res ex his quaeque creari,
 hasce secundum res animi natura videtur 35
 atque animae claranda meis iam versibus esse
 et metus ille foras praeceptis Acheruntis agendus,
 funditus humanam qui vitam turbat ab imo
 omnia suffundens mortis nigrore neque ullam

terrors of the mind are dispelled, the walls of the world part asunder, I see things in operation throughout the whole void: the divinity of the gods is revealed and their tranquil abodes which neither winds do shake nor clouds drench with rains nor snow congealed by sharp frost harms with hoary fall: an ever cloudless ether o'ercanopies them, and they laugh with light shed largely round. Nature too supplies all their wants and nothing ever impairs their peace of mind. But on the other hand the Acherusian quarters are nowhere to be seen, though earth is no bar to all things being descried, which are in operation underneath our feet throughout the void. At all this a kind of godlike delight mixed with shuddering awe comes over me to think that nature by thy power is laid thus visibly open, is thus unveiled on every side.

And now since I have shewn what-like the beginnings of all things are and how diverse with varied shapes as they fly spontaneously driven on in everlasting motion, and how all things can be severally produced out of these, next after these questions the nature of the mind and soul should methinks be cleared up by my verses and that dread of Acheron be driven headlong forth, troubling as it does the life of man from its

esse voluptatem liquidam puramque relinquit. 40
 nam quod saepe homines morbos magis esse timendos
 infamemque ferunt vitam quam Tartara leti
 et se scire animae naturam sanguinis esse
 46 aut etiam venti, si fert ita forte voluntas,
 44 nec prosum quicquam nostrae rationis egere, 45
 hinc licet advertas, animum magis omnia laudis
 47 iactari causa quam quod res ipsa probetur. +
 extorres idem patria longeque fugati
 conspectu ex hominum, foedati crimine turpi,
 omnibus aerumnis adfecti denique vivunt, 50
 (et quocumque tamen miseri venere parentant
 et nigras mactant pecudes et manibu' divis
 inferias mittunt) multoque in rebus acerbis
 acrius advertunt animos ad religionem.
 quo magis in dubiis hominem spectare periculis 55
convenit adversisque in rebus noscere qui sit;
 nam verae voces tum demum pectore ab imo
 eiciuntur et eripitur persona, manet res.
 denique avarities et honorum caeca cupido
 quae miseros homines cogunt transcendere fines 60
 iuris et interdum socios scelerum atque ministros
 noctes atque dies niti praestante labore

inmost depths and overspreading all things with the blackness of death, allowing no pleasure to be pure and unalloyed. For as to what men often give out that diseases and a life of shame, are more to be feared than Tartarus place of death, and that they know the soul to be of blood or it may be of wind, if haply their choice so direct, and that they have no need at all of our philosophy, you may perceive for the following reasons that all these boasts are thrown out more for glory's sake than because the thing is really believed. These very men exiles from their country and banished far from the sight of men live degraded by foul charge of guilt, sunk in a word in every kind of misery, and whithersoever the poor wretches have come, they yet do offer sacrifices to the dead and slaughter black sheep and make libations to the gods manes, and in times of distress turn their thoughts to religion much more earnestly. Wherefore you can better test the man in doubts and dangers and mid adversity learn what he is; for then and not till then the words of truth are forced out from the bottom of his heart: the mask is torn off, the reality is left. Avarice again and blind lust of honours which constrain unhappy men to overstep the bounds of right and sometimes as partners and agents of crimes to strive night and day with sur-

ad summas emergere opes, haec vulnera vitae
 non minimam partem mortis formidine aluntur.
 turpis enim ferme contemptus et acris egestas 65
 semota ab dulci vita stabilique videntur
 et quasi iam leti portas cunctarier ante;
 unde homines dum se falso terrore coacti
 effugisse volunt longe longeque remosse,
 sanguine civili rem conflant divitiasque 70
 conduplicant avidi, caedem caede accumulantes;
 crudeles gaudent in tristi funere fratris
 et consanguineum mensas odere timentque.
 consimili ratione ab eodem saepe timore
 macerat invidia. ante oculos illum esse potentem, 75
 illum aspectari, claro qui incedit honore,
 ipsi se in tenebris volvi caenoque queruntur.
 intereunt partim statuarum et nominis ergo.
 et saepe usque adeo, mortis formidine, vitae
 percipit humanos odium lucisque videndae, 80
 ut sibi consciscant maerenti pectore letum
 obliti fontem curarum hunc esse timorem,
 hunc vexare pudorem, hunc vincula amicitiai
 rumpere et in summa pietatem evertere fundo;
 nam iam saepe homines patriam carosque parentis 85

passing effort to struggle up to the summit of power,—these sores of life are in no small measure fostered by the dread of death. For foul scorn and pinching want in every case are seen to be far removed from a life of pleasure and security and to be a loitering so to say before the gates of death. And while men driven on by an unreal dread wish to escape far away from these and keep them far from them, they amass wealth by civil bloodshed and greedily double their riches piling up murder on murder; cruelly triumph in the sad death of a brother and hate and fear the tables of kinsfolk. Often likewise from the same fear envy causes them to pine: they make moan that before their very eyes he is powerful, he attracts attention, who walks arrayed in gorgeous dignity, while they are wallowing in darkness and dirt. Some wear themselves to death for the sake of statues and a name. And often to such a degree through dread of death does hate of life and of the sight of daylight seize upon mortals, that they commit self-murder with a sorrowing heart, quite forgetting that this fear is the source of their cares, puts shame to rout, bursts asunder the bonds of friendship and in fine overturns duty from its very base; since often ere now men have betrayed country and

prodiderunt, vitare Acherusia templa petentes.
 nam veluti pueri trepidant atque omnia caecis
 in tenebris metuunt, sic nos in luce timemus
 interdum, nilo quae sunt metuenda magis quam
 quae pueri in tenebris pavitant finguntque futura. 90
 hunc igitur terrorem animi tenebrasque necessest
 non radii solis neque lucida tela diei
 discutiant, sed naturae species ratioque.

Primum ^{rational part of soul} animum dico, mentem quam saepe vocamus,
 in quo consilium vitae regimenque locatum est, 95
 esse hominis partem nilo minus ac manus et pes
 atque oculi partes animantis totius extant.

• • • • •
 sensum animi certa non esse in parte locatum,
 verum ^{consilium} habitum quendam vitalem corporis esse,
 harmoniam Grai quam dicunt, quod faciat nos 100
 vivere cum sensu, nulla cum in parte siet mens;
 ut bona saepe valetudo cum dicitur esse
 corporis, et non est tamen haec pars ulla valentis.
 sic animi sensum non certa parte reponunt;
 magno opere in quo ^{in many other parts} mi diversi errare videntur. 105
 saepe itaque, in promptu corpus quod cernitur, aegret,
 cum tamen ex alia laetamur ^{another} parte latenti;

dear parents in seeking to shun the Acherusian quarters. For even as children are flurried and dread all things in the thick darkness, thus we in the daylight fear at times things not a whit more to be dreaded than what children shudder at in the dark and fancy sure to be. This terror therefore and darkness of mind must be dispelled not by the rays of the sun and glittering shafts of day, but by the aspect and law of nature.

First then I say that the mind which we often call the understanding, in which dwells the directing and governing principle of life, is no less part of the man, than hand and foot and eyes are parts of the whole living creature. [Some however affirm] that the sense of the mind does not dwell in a distinct part, but is a certain vital state of the body, which the Greeks call harmonia, because by it, they say, we live with sense, though the understanding is in no one part; just as when good health is said to belong to the body, though yet it is not any one part of the man in health. In this way they do not assign a distinct part to the sense of the mind; in all which they appear to me to be grievously at fault in more ways than one. Oftentimes the body which is visible to sight, is sick, while yet we have pleasure in another hidden part; and

et retro ^{conversely} fit uti contra sit saepe vicissim,
 cum miser ex animo laetatur corpore toto;
 non alio pacto quam si, pes cum dolet aegri, 110
 in nullo caput interea sit forte dolore.

praeterea molli cum somno dedita membra
 effusumque iacet sine sensu corpus ^{on the whole} honustum,
 est aliud tamen in nobis quod tempore in illo
 multimodis agitur et omnis accipit in se 115
 laetitiae ^{animo} motus et curas cordis inanis.

nunc animam quoque ut in membris cognoscere possis
 esse neque harmonia corpus sentire solere,
 principio fit uti detracto corpore multo
 saepe tamen nobis in membris vita moretur; 120
 atque ^{yet} eadem rursum, cum corpora ^{alone} pauca caloris
 diffugere forasque per os est editus aer,
 deserit extemplo venas atque ossa relinquit;
 noscere ut hinc possis non aequas omnia partis
 corpora habere neque ex aequo fulcire salutem, 125
 sed magis haec, venti quae sunt calidique vaporis
 semina, curare in membris ut vita moretur.
 est igitur calor ac ventus vitalis in ipso
 corpore qui nobis moribundos deserit artus.
 quapropter quoniam est animi natura reperta 130
 atque animae quasi pars hominis, redde harmoniai

oftentimes the case is the very reverse, the man who is unhappy in mind feeling pleasure in his whole body; just as if, while a sick man's foot is pained, the head meanwhile should be in no pain at all. Moreover when the limbs are consigned to soft sleep and the burdened body lies diffused without sense, there is yet a something else in us which during that time is moved in many ways and admits into it all the motions of joy and unreal cares of the heart. Now that you may know that the soul as well is in the limbs and that the body is not wont to have sense by any harmony, this is a main proof: when much of the body has been taken away, still life often stays in the limbs; and yet the same life, when a few bodies of heat have been dispersed abroad and some air has been forced out through the mouth, abandons at once the veins and quits the bones: by this you may perceive that all bodies have not functions of like importance nor alike uphold existence, but rather that those seeds which constitute wind and heat, cause life to stay in the limbs. Therefore vital heat and wind are within the body, and abandon our frame at death. Since then the nature of the mind and of the soul have been proved to be a part as it were of the man, surrender the name of har-

nomen, ad organicos alto delatum Heliconi;
 sive aliunde ipsi porro traxere et in illam
 transtulerunt, proprio quae tum res nomine egebat.
 quidquid *id* est, habeant: tu cetera percipe dicta. 135

Nunc animum atque animam dico coniuncta teneri
 inter se atque unam naturam conficere ex se,
 sed caput esse quasi et dominari in corpore toto
 consilium quod nos animum mentemque vocamus.
 idque situm media regione in pectoris haeret. 140
 hic exultat enim pavor ac metus, haec loca circum
 laetitiae mulcent; hic ergo mens animusquest.
 cetera pars animae per totum dissita corpus
 paret et ad numen mentis momenque movetur.
 idque sibi solum per se sapit, *id* sibi gaudet, 145
 cum neque res animam neque corpus commovet una.
 et quasi, cum caput aut oculus temptante dolore
 laeditur in nobis, non omni concruciamur
 corpore, sic animus nonnumquam laeditur ipse
 laetitiaque viget, cum cetera pars animai 150
 per membra atque artus nulla novitate cietur.
 verum ubi vementi magis est commota metu mens,
 consentire animam totam per membra videmus
 sudoresque ita palloremque existere toto

mony, whether brought down to musicians from high Helicon, or whether rather they have themselves taken it from something else and transferred it to that thing which then was in need of a distinctive name; whatever it be, let them keep it: do you take in the rest of my precepts.

Now I assert that the mind and the soul are kept together in close union and make up a single nature, but that the directing principle which we call mind and understanding, is the head so to speak and reigns paramount in the whole body. It has a fixed seat in the middle region of the breast: here throb fear and apprehension, about these spots dwell soothing joys; therefore here is the understanding or mind. All the rest of the soul disseminated through the whole body obeys and moves at the will and inclination of the mind. It by itself alone knows for itself, rejoices for itself, at times when the impression does not move either soul or body together with it. And as when some part of us, the head or the eye, suffers from an attack of pain, we do not feel the anguish at the same time over the whole body, thus the mind sometimes suffers pain by itself or is inspirited with joy, when all the rest of the soul throughout the limbs and frame is stirred by no novel sensation. But when the mind is excited by some more vehement apprehension, we see the whole

corpore et infringi linguam vocemque aboriri, 155
 caligare oculos, sonere auris, succidere artus,
 denique concidere ex animi terrore videmus
 saepe homines; facile ut quivis hinc noscere possit
 esse animam cum animo coniunctam, quae cum animi vi
 percussast, exim corpus propellit et icit. 160

Haec eadem ratio naturam animi atque animai
 corpoream docet esse; ubi enim propellere membra,
 corripere ex somno corpus mutareque vultum
 atque hominem totum regere ac versare videtur,
 quorum nil fieri sine tactu posse videmus 165
 nec tactum porro sine corpore, nonne fatendumst
 corporea natura animum constare animamque?
 praeterea pariter fungi cum corpore et una
 consentire animum nobis in corpore cernis.
 si minus offendit vitam vis horrida teli 170
 ossibus ac nervis disclusis intus adacta,
 at tamen insequitur languor terraeque petitus
 segnis, et in terra mentis qui gignitur aestus,
 interdumque quasi exurgendi incerta voluntas.
 ergo corpoream naturam animi esse necessest, 175
 corporeis quoniam telis ictuque laborat.

I feel in unison through all the limbs, and thus sweats and paleness
 head over the whole body, the tongue falter, the voice die away, a mist
 over the eyes, the ears ring, the limbs sink under one; in short we
 often see men drop down from terror of mind; so that anybody may
 easily perceive from this that the soul is closely united with the mind,
 and, when it has been shaken by the influence of the mind, forthwith
 it strikes the body.

Therefore we conclude that the nature of the mind and soul is
 corporeal. For we see it push the limbs, rouse the body from sleep,
 direct its countenance and guide and turn about the whole man, and
 when we see that none of these effects can take place without touch nor
 touch without body, must we not admit that the mind and the soul are
 of a bodily nature? Again you perceive that our mind in our body
 suffers together with the body and feels in unison with it. When a
 blow upon with a shudder-causing force has been driven in and has laid
 bare the bones and sinews within the body, if it does not take life, yet there
 ensues a faintness and a lazy sinking to the ground and on the ground
 a turmoil of mind which arises, and sometimes a kind of undecided
 inclination to get up. Therefore the nature of the mind must be bodily,
 since it suffers from bodily weapons and blows.

Is tibi nunc animus quali sit corpore et unde
 constiterit pergam rationem reddere dictis.
 principio esse aio persuptilem atque minutis
 perquam corporibus factum constare. id ita esse 180
 hinc licet advertas animum ut pernoscere possis:
 nil adeo fieri celeri ratione videtur,
 quam sibi mens fieri proponit et inchoat ipsa;
 ocius ergo animus quam res se perciet ulla,
 ante oculos quorum in promptu natura videtur. 185
 at quod mobile tanto operest, constare rutundis
 perquam seminibus debet perquamque minutis,
 momine uti parvo possint impulsa moveri.
 namque movetur aqua et tantillo momine flutat
 quippe volubilibus parvisque creata figuris. 190
 at contra mellis constantior est natura
 et pigri latices magis et cunctantior actus;
 haeret enim inter se magis omnis materiali
 copia, nimirum quia non tam levibus extat
 corporibus neque tam suptilibus atque rutundis. 195
 namque papaveris aura potest suspensa levisque
 cogere ut ab summo tibi diffluat altus acervus;
 at contra lapidum conlectum ipse euru' movere
 noenu potest. igitur parvissima corpora proquam

I will now go on to explain in my verses of what kind of body the
 mind consists and out of what it has been formed. First of all I say
 that it is extremely fine and formed of exceedingly minute bodies. That
 this is so you may, if you please to attend, clearly perceive from what
 follows: nothing that is seen takes place with a velocity equal to that
 of the mind when it starts some suggestion and actually sets it agoing,
 the mind therefore is stirred with greater rapidity than any of the things
 whose nature stands out visible to sight. But that which is so passing
 nimble, must consist of seeds exceedingly round and exceedingly minute,
 in order to be stirred and set in motion by a small moving power. Thus
 water is moved and heaves by ever so small a force, formed as it is of
 small particles apt to roll. But on the other hand the nature of honey
 is more sticky, its liquid more sluggish and its movement more dilatory,
 for the whole mass of matter coheres more closely, because sure enough
 it is made of bodies not so smooth fine and round. A breeze however
 gentle and light can force, as you may see, a high heap of poppy seed
 to be blown away from the top downwards; but on the other hand
 eurus itself cannot move a heap of stones. Therefore bodies possess a

- et levissima sunt, ita mobilitate fruuntur; 200
 at contra quaecumque magis cum pondere magno
 asperaque inveniuntur, eo stabilita magis sunt.
 1 nunc igitur quoniam *est* animi natura reperta
 mobilis egregie, perquam constare necessest
 corporibus parvis et levibus atque rutundis. 205
 quae tibi cognita res in multis, o bone, rebus
 utilis invenietur et opportuna cluebit.
 11 haec quoque res etiam naturam dedicat eius, ^Δ
 quam tenui constet textura quamque loco se
 contineat parvo, si possit conglomerari, 210
 quod simul atque hominem leti secura quies est
 indepta atque animi natura animaeque recessit,
 nil ibi libatum de toto corpore cernas
 ad speciem, nil ad pondus: mors omnia praestat
 vitalem praeter sensum calidumque vaporem. 215
 ergo animam totam perparvis esse necessest
 seminibus, nexam per venas viscera nervos;
 quatenus, omnis ubi e tota iam corpore cessit,
 extrema membrorum circumcaesura tamen se
 incolumem praestat nec deficit ponderis hilum. 220
 quod genus est Bacchi cum flos evanuit aut cum
 spiritus unguenti suavis diffugit in auras

power of moving in proportion to their smallness and smoothness; and on the other hand the greater weight and roughness bodies prove to have, the more stable they are. Since then the nature of the mind has been found to be eminently easy to move, it must consist of bodies exceedingly small smooth and round. The knowledge of which fact, my good friend, will on many accounts prove useful and be serviceable to you. ^Δ The following fact too likewise demonstrates how fine the texture is of which its nature is composed, and how small the room is in which it can be contained, could it only be collected into one mass: soon as the untroubled sleep of death has gotten hold of a man and the nature of the mind and soul has withdrawn, you can perceive then no diminution of the entire body either in appearance or weight: death makes all good save the vital sense and heat. Therefore the whole soul must consist of very small seeds and be inwoven through veins flesh sinews; inasmuch as, after it has withdrawn from the whole body, the exterior contour of the limbs preserves itself entire and not a tittle of the weight is lost. Just in the same way when the flavour of wine is gone or when the delicious aroma of a perfume has been dispersed into the air or when the

aut aliquo cum iam sucus de corpore cessit;
 nil oculis tamen esse minor res ipsa videtur
 propterea neque detractum de pondere quicquam, 225
 nimirum quia multa minutaque semina sucos
 efficiunt et odorem in toto corpore rerum.

quare etiam atque etiam mentis naturam animaeque
 scire licet perquam paucillis esse creatam
 seminibus, quoniam fugiens nil ponderis aufert. 230

Nec tamen haec simplex nobis natura putanda est.
 tenuis enim quaedam moribundos deserit aura
 mixta vapore, vapor porro trahit aera secum.
 nec calor est quisquam, cui non sit mixtus et aer;
 rara quod eius enim constat natura, necessest 235
 aeris inter eum primordia multa moveri.

iam triplex animi est igitur natura reperta;
 nec tamen haec sat sunt ad sensum cuncta creandum,
 nil horum quoniam recepit res posse creare
 sensiferos motus *et homo* quae mente volutat. 240.

quarta quoque his igitur quaedam natura necessest
 adtribuatur; east omnino nominis expers;
 qua neque mobilius quicquam neque tenuius exstat,
 nec magis e parvis et levibus est elementis;
 sensiferos motus quae didit prima per artus. 245

savour has left some body, yet the thing itself does not look smaller to the eye, nor does aught seem to have been taken from the weight, because sure enough many minute seeds make up the savours and the odour in the whole body of the several things. Therefore, again and again I say, you are to know that the nature of the mind and the soul has been formed of exceedingly minute seeds, since at its departure it takes away none of the weight.

We are not however to suppose that this nature is single. For a certain subtle spirit mixed with heat quits men at death, and then the heat draws air along with it; there being no heat which has not air too mixed with it: for since its nature is rare, many first-beginnings of air must move about through it. Thus then the nature of the mind is proved to be threefold; and yet these things all together are not sufficient to produce sense; since the fact of the case does not admit that any of these can produce sense-giving motions and the thoughts which a man turns over in mind. Thus some fourth nature too must be added to these: it is altogether without name; than it nothing exists more nimble or more fine, or of smaller or smoother elements: it first transmits the sense-giving motions through the frame; for it is first stirred, made up

prima cietur enim, parvis perfecta figuris;
 inde calor motus et venti caeca potestas
 accipit, inde aer; inde omnia mobilitantur,
 concutitur sanguis, tum viscera persentiscunt
 omnia, postremis datur ossibus atque medullis 250
 sive voluptas est sive est contrarius ardor.

nec temere huc dolor usque potest penetrare neque acre
 permanare malum, quin omnia perturbentur
 usque adeo *ut* vitae desit locus atque animai
 diffugiant partes per caulas corporis omnis. 255
 sed plerumque fit in summo quasi corpore finis
 motibus: hanc ob rem vitam retinere valemus.

Nunc ea quo pacto inter sese mixta quibusque
 compta modis vigeant rationem reddere aventem
 abstrahit invitum patrii sermonis egestas; 260
 sed tamen, ut potero summam attingere, tangam.
 inter enim cursant primordia principiorum
 motibus inter se, nil ut secernier unum
 possit nec spatium fieri divisa potestas,
 sed quasi multae ^{vis}vis unius corporis extant. 265
 quod genus in quovis animantum viscere volgo
 est odor et quidam calor et sapor, et tamen ex his

as it is of small particles; next the heat and the unseen force of the spirit receive the motions, then the air; then all things are set in action, the blood is stirred, every part of the flesh is filled with sensation; last of all the feeling is transmitted to the bones and marrow, whether it be one of pleasure or an opposite excitement. No pain however can lightly pierce thus far nor any sharp malady make its way in, without all things being so thoroughly disordered that no room is left for life and the parts of the soul fly abroad through all the pores of the body. But commonly a stop is put to these motions on the surface as it were of the body: for this reason we are able to retain life.

Now though I would fain explain in what way these are mixed up together and what is the method of their arrangement when they exert their powers, the poverty of my native speech deters me sorely against my will: yet will I touch upon them and in summary fashion to the best of my ability: the first-beginnings by their mutual motions are interlaced in such a way that none of them can be separated by itself, nor can the function of any go on divided from the rest by any interval; but they are so to say the several qualities of one body. Even so in any flesh of living creature you please without exception there is a smell and a heat and savour, and yet out of all these is made up one single bulk of

omnibus est unum perfectum corporis augmen.
 sic calor atque aer et venti caeca potestas
 mixta creant unam naturam et mobilis illa 270
 vis, initum motus ab se quae dividit ollis,
 sensifer unde oritur primum per viscera motus.
 nam penitus prorsum latet haec natura subestque
 nec magis hac infra quicquam est in corpore nostro
 atque anima est animae proporro totius ipsa. 275
 quod genus in nostris membris et corpore toto
 mixta latens animi vis est animaeque potestas,
 corporibus quia de parvis paucisque creatast.
 sic tibi nominis haec expers vis facta minutis
 corporibus latet atque animae quasi totius ipsa 280
 proporrost anima et dominatur corpore toto.
 consimili ratione necessest ventus et aer
 et calor inter se vigeant commixta per artus
 adque aliis aliud subsit magis emineatque
 ut quiddam fieri videatur ab omnibus unum, 285
 ni calor ac ventus seorsum seorsumque potestas
 aeris interemant sensum diductaque solvant.
 est etenim calor ille animo, quem sumit, in ira
 cum fervescit et ex oculis micat acribus ardor;

body. Thus the heat and the air and the unseen power of the spirit mixed together produce a single nature, together with that nimble force which transmits to them from itself the origin of motion ; by which means sense-giving motion first takes its rise though the fleshly frame. For this nature lurks secreted in its inmost depths, and nothing in our body is farther beneath all ken than it, and more than this it is the very soul of the whole soul. Just in the same way as the power of the mind and the function of the soul are latent in our limbs and throughout our body, because they are each formed of small and few bodies : even so, you are to know, this nameless power made of minute bodies is concealed and is moreover the very soul so to say of the whole soul, and reigns supreme in the whole body. On a like principle the spirit and air and heat must, as they exert their powers be mixed up together through the frame, and one must ever be more out of view or more prominent than another, that one substance may be seen to be formed from the union of all, lest the heat and spirit apart by themselves and the power of the air apart by itself should destroy sense and dissipate it by their disunion. Thus the mind possesses that heat which it displays when it boils up in anger and fire flashes from the keen eyes ; there is too much cold spirit

est et frigida multa comes formidinis aura 290
 quae ciet horrorem membris et concitat artus;
 est etiam quoque pacati status aeris ille,
 pectore tranquillo qui fit voltuque sereno.
 sed calidi plus est illis quibus acria corda
 iracundaque mens facile effervescit in ira. 295
 quo genere in primis vis est violenta leonum,
 pectora qui fremitu rumpunt plerumque gementes
 nec capere irarum fluctus in pectore possunt.
 at ventosa magis cervorum frigida mens est
 et gelidas citius per viscera concitat auras 300
 quae tremulum faciunt membris existere motum.
 at natura boum placido magis aere vivit,
 nec nimis irai fax umquam subdita percit
 fumida, suffundens caecae caliginis umbra,
 nec gelidis torpet telis prefixa pavoris: 305
 inter utrosque sitast, cervos saevosque leones.
 sic hominum genus est. quamvis doctrina politos
 constituat pariter quosdam, tamen illa relinquit
 naturae cuiusque animi vestigia prima.
 nec radicitus evelli mala posse putandumst, 310
 quin proclivius hic iras decurrat ad acris,
 ille metu citius paulo temptetur, at ille

comrade of fear, which spreads a shivering over the limbs and stirs the whole frame ; yes and there is also that condition of still air which has place when the breast is calm and the looks cheerful. But they have more of the hot whose keen heart and passionate mind lightly boils up in anger. Foremost in this class comes the fierce violence of lions who often as they chafe break their hearts with their roaring and cannot contain within their breast the billows of their rage. Then the chilly mind of stags is fuller of the spirit and more quickly rouses through all the flesh its icy currents which spread over the limbs a shivering motion. But the nature of oxen has its life rather from the still air, and never does the smoky torch of anger applied to it stimulate it too much, shedding over it the shadow of mirky gloom, nor is it transfixed and stiffened by the icy shafts of fear : it lies between the other two, stags and cruel lions. And thus it is with mankind : however much teaching renders some equally refined, it yet leaves behind the earliest traces of the nature of each mind ; and we are not to suppose that evil habits can be so thoroughly plucked up by the roots, that one man shall not be more prone than another to keen anger, a second shall not be somewhat more

tertius accipiat quaedam clementius aequo.
 inque aliis rebus multis differre necessest
 naturas hominum varias moresque sequacis; 315
 quorum ego nunc nequeo caecas exponere causas
 nec reperire figurarum tot nomina quot sunt
 principiis, unde haec oritur variantia rerum.
 illud in his rebus videor firmare potesse,
 usque adeo naturarum vestigia linqui 320
 parvola quae nequeat ratio depellere nobis,
 ut nil inpediat dignam dis degere vitam.

Haec igitur natura tenetur corpore ab omni
 ipsaque corporis est custos et causa salutis;
 nam communibus inter se radicibus haerent 325
 nec sine perniciē divelli posse videntur.
 quod genus e thuris glaebris evellere odorem
 haud facile est quin intereat natura quoque eius.
 sic animi atque animae naturam corpore toto
 extrahere haut facile est quin omnia dissoluantur. 330
 inplexis ita principiis ab origine prima
 inter se fiunt consorti praedita vita,
 nec sibi quaeque sine alterius vi posse videtur
 corporis atque animi seorsum sentire potestas,

quickly assailed by fear, a third shall not take some things more meekly than is right. In many other points there must be differences between the varied natures of men and the tempers which follow upon these; though at present I am unable to set forth the hidden causes of these or to find names enough for the different shapes which belong to the first-beginnings from which arises this diversity of things. What herein I think I may affirm is this: traces of the different natures left behind, which reason is unable to expel from us are so exceedingly slight that there is nothing to hinder us from living a life worthy of gods.

Well, this nature is contained by the whole body and is in turn the body's guardian and the cause of its existence; for the two adhere together with common roots and cannot it is plain be riven asunder without destruction. Even as it is not easy to pluck the perfume out of lumps of frankincense without quite destroying its nature as well; so it is not easy to withdraw from the whole body the nature of the mind and soul without dissolving all alike. With principles so interlaced from the beginning of their existence are they formed and gifted with a life of joint partnership, and it is plain that the faculty of the body and of the mind cannot feel separately, each alone without the other's power,

sed communibus inter eas conflatur utrimque 335
 motibus accensus nobis per viscera sensus.
 praeterea corpus per se nec gignitur umquam
 nec crescit neque post mortem durare videtur.
 non enim, ut umor aquae dimittit saepe vaporem
 qui datus est, neque ea causa convellitur ipse, 340
 sed manet incolumis, non, inquam, sic animai
 discidium possunt artus perferre relict,
 sed penitus pereunt convulsi conque putrescunt.
 ex ineunte aevo sic corporis atque animai
 mutua vitalis discunt contagia motus 345
 maternis etiam membris alvoque reposta,
 discidium *ut* nequeat fieri sine peste maloque;
 ut videas, quoniam coniunctast causa salutis,
 coniunctam quoque naturam consistere eorum.
 Quod superest, siquis corpus sentire refutat 350
 atque animam credit permixtam corpore toto
 suscipere hunc motum quem sensum nominamus,
 vel manifestas res contra verasque repugnat.
 quid sit enim corpus sentire quis adferet umquam,
 si non ipsa palam quod res dedit ac docuit nos? 355
 at dimissa anima corpus caret undique sensu;

but sense is kindled throughout our flesh and blown into flame between the two by the joint motions of these two natures. Moreover the body by itself is never either begotten or grows or, it is plain, continues to exist after death. For not in the way that the liquid of water often loses the heat which has been given to it, yet is not for that reason itself riven in pieces, but remains unimpaired,—not in this way, I say, can the abandoned frame endure the separation of the soul, but riven in pieces it utterly perishes and rots away. Thus the mutual connexions of body and soul from the first moment of their existence learn the vital motions even while hid in the body and womb of the mother, so that no separation can take place without mischief and ruin. Thus you may see that, since the cause of existence lies in their joint action, their nature too must be a joint nature.

Furthermore if any one tries to disprove that the body feels and believes that the soul mixed through the whole body takes upon it this motion which we name sense, he combats even manifest and undoubted facts. For who will ever bring forward any explanation of what the body's feeling is, except that which the plain fact of the case has itself given and taught to us? But when the soul it is said has departed, the

perdit enim quod non proprium fuit eius in aevo.

MULTAQUE PRAETEREA PERDITUM EXPELLITUR AEVO QUAM

Dicere porro oculos nullam rem cernere posse,
sed per eos animum ut foribus spectare reclusis, 360
difficilest, contra cum sensus dicat eorum;

SENSUS ENIM TRAHIT ATQUE ACIES DETRUDIT AD IPSAS
fulgida praesertim cum cernere saepe nequimus,
lumina luminibus quia nobis praepediuntur.

quod foribus non fit; neque enim, quia cernimus ipsi, 365
ostia suscipiunt ullum reclusa laborem.

praeterea si pre foribus sunt lumina nostra,
iam magis exemptis oculis debere videtur
cernere res animus sublatis postibus ipsis.

Illud in his rebus nequaquam sumere possis, 370

Democriti quod sancta viri sententia ponit,
corporis atque animi primordia singula privis
adposita alternis variare, ac nectere membra.

nam cum multo sunt animae elementa minora
quam quibus e corpus nobis et viscera constant, 375
tum numero quoque concedunt et rara per artus
dissita sunt dumtaxat; ut hoc promittere possis,

body throughout is without sense; yes for it loses what was not its own peculiar property in life.

Again to say that the eyes can see no object, but that the soul discerns through them as through an open door, is far from easy, since their sense contradicts this; and the more so that often we are unable to perceive bright things, because our eyes are embarrassed by the lights. But this is not the case with doors; for, because we ourselves see, the open doors do not therefore undergo any fatigue. Again if our eyes are in the place of doors, in that case when the eyes are removed the mind ought to have more power of seeing things after doors jambs and all have been taken out of the way.

And herein you must by no means adopt the opinion which the revered judgment of the worthy man Democritus lays down, that the first-beginnings of body and mind placed together in successive layers come in alternate order and so weave the tissue of our limbs. For not only are the elements of the soul much smaller than those of which our body and flesh are formed, but they are also much fewer in number and are disseminated merely in scanty number through the frame, so that you can warrant no more than this: the several first-beginnings of the soul keep at distances from each other exactly corresponding to the smallest possible number of bodies which being severally infused into us

- quantula ^mpriva queant nobis iniecta ciere
 corpora sensiferos motus in corpore, tanta
 intervalla tenere exordia priva animai. 380
 nam neque pulveris interdum sentimus adhaesum
 corpore nec membris incussam sidere cretam,
 nec nebulam noctu neque aranei tenvia fila
 obvia sentimus, quando obretimur euntes
 nec supera caput eiusdem cecidisse vietam 385
 vestem nec plumas avium papposque volantis
 qui nimia levitate cadunt plerumque gravatim,
 nec repentis itum cuiusviscumque animantis
 sentimus nec priva pedum vestigia quaeque,
 corpore quae in nostro culices et cetera ponunt. 390
 usque adeo prius est in nobis multa ciendum
 393 semina corporibus nostris inmixta per artus,
 392 quam primordia sentiscant concussa animai
 et quam in his intervallis tuditantia possint
 concursare coire et dissultare vicissim. 395
 Et magis est animus vitae claustra coercens
 et dominantior ad vitam quam vis animai.
 nam sine mente animoque nequit residere per artus
 temporis exiguum partem pars ulla animai,
 sed comes insequitur facile et discedit in auras 400
 et gelidos artus in leti frigore linoit.

have the power of exciting in our body the sense-giving motions. Thus at times we do not feel the adhesion of dust when it settles on our body, nor the impact of chalk when it settles on our limbs, nor do we feel a mist at night nor a spider's slender threads as they come against us, when we are caught in its meshes in moving along, nor the same insect's flimsy web when it has fallen on our head, nor the feathers of birds and down of plants as it flies about, which commonly from exceeding lightness does not lightly fall, nor do we feel the tread of every creeping creature whatsoever nor each particular footprint which gnats and the like stamp on our body. So invariably must many seeds mixed up in our bodies throughout our frames be set in motion ere the first-beginnings of the soul are roused to feel, and ere by thumping with such spaces between they can clash, unite and in turn recoil.

The mind has more to do with holding the fastnesses of life and has more sovereign sway over it than the power of the soul. For without the understanding and the mind no part of the soul can maintain itself in the frame the smallest fraction of time, but follows at once in the other's train and passes away into the air and leaves the cold limbs in

at manet in vita cui mens animusque remansit.⁺
 quamvis est circum caesis lacer undique membris
 truncus, adempta anima circum membrisque remota
 vivit et aetherias vitalis suscipit auras. 405
 si non omnimodis, at magna parte animai
 privatus, tamen in vita cunctatur et haeret;
 ut, lacerato oculo circum si pupula mansit
 incolumis, stat cernundi vivata potestas,
 dummodo ne totum corrumpas luminis orbem 410
 et circum caedas aciem solamque relinquo;
 id quoque enim sine perniciē non fiet eorum.
 at si tantula pars oculi media illa peresa est,
 occidit extemplo lumen tenebraeque secuntur,
 incolumis quamvis aliquoi *sit* splendidus orbis. 415
 hoc anima atque animus vincti sunt foedere semper.

Nunc age, nativos animantibus et mortalis
 esse animos animasque levis ut noscere possis,
 conquisita diu dulcique reperta labore
 digna tua pergam disponere carmina cura. 420
 tu fac utrumque uni subiungas nomen eorum,
 atque animam verbi causa cum dicere pergam,
 mortalem esse docens, animum quoque dicere credas,

the chill of death. But he abides in life whose mind and understanding continue to stay with him: though the trunk is mangled with its limbs shorn all round about it, after the soul has been taken away on all sides and been severed from the limbs the trunk yet lives and inhales the ethereal airs of life. When robbed, if not of the whole, yet of a large portion of the soul, it still lingers in and cleaves to life; just as, after the eye has been lacerated all round if the pupil has continued uninjured, the living power of sight remains, provided always you do not destroy the whole ball of the eye and pare close round the pupil and leave only it; for that will not be done without destroying the eyes. But if that middle portion of the eye, small as it is, is eaten into, the sight is gone at once and darkness ensues, though a man have the bright ball quite unimpaired. On such terms of union soul and mind are ever bound to each other.

Now mark me: that you may know that the minds and light souls of living creatures have birth and are mortal, I will go on to set forth verses worthy of your attention got together by long study and invented with welcome effort. Do you mind to attach to either of the two either name, and when for instance I shall choose to speak of the soul, showing it to be mortal, believe that I speak of the mind as well, inasmuch as

quatenus est unum inter se coniunctaque res est.
 , principio quoniam tenuem constare minutis 425
 corporibus docui multoque minoribus esse
 principiis factam quam liquidus umor aquai
 aut nebula aut fumus:—nam longe mobilitate
 praestat et a tenui causa magis icta movetur;
 quippe ubi imaginibus fumi nebulaeque movetur: 430
 quod genus in somnis sopiti ubi cernimus alte
 exhalare vaporem altaria ferreque fumum;
 nam procul hinc dubio nobis simulacra genuntur:—
 nunc igitur quoniam quassatis undique vasis
 diffluere umorem et laticem discedere cernis 435
 et nebula ac fumus quoniam discedit in auras,
 crede animam quoque diffundi multoque perire
 ocius et citius dissolvi in corpora prima,
 cum semel ex hominis membris ablata recessit.
 quippe etenim corpus, quod vas quasi constitit eius, 440
 quam cohibere nequit conquassatum ex aliqua re
 ac rarefactum detracto sanguine venis,
 aere qui credas posse hanc cohiberier ullo?
 corpore qui nostro rarus magis is cohibessit?
 ʘ Praeterea gigni pariter cum corpore et una 445
 crescere sentimus pariterque senescere mentem.

both make up one thing and are one united substance. First of all then since I have shewn the soul to be fine and to be formed of minute bodies and made up of much smaller first-beginnings than is the liquid of water or mist or smoke:—for it far surpasses these in nimbleness and moves if struck by a far slenderer cause; inasmuch as it moves by images of smoke and mist; as when for instance sunk in sleep we see altars steam forth their heat and send up their smoke on high; for beyond a doubt images are begotten for us from these things:—well then since you see on the vessels being shattered the water flow away on all sides, and since mist and smoke pass away into air, believe that the soul too is shed abroad and perishes much more quickly and dissolves sooner into its first bodies, when once it has been taken out of the limbs of a man and has withdrawn. For how can you believe that this soul which the body that serves for its vessel, cannot hold, if shattered from any cause and rarefied by the withdrawal of blood from the veins, how can you believe I say that this soul can be held by any air? how can that air which is rarer than our body hold it in?

ʘ Again we perceive that the mind is begotten along with the body and grows up together with it and becomes old along with it. For even

nam velut infirmo pueri teneroque vagantur
 corpore, sic animi sequitur sententia tervis.
 inde ubi robustis adolevit viribus aetas,
 consilium quoque maius et auctior est animi vis. 450
 post ubi iam validis quassatum est viribus aevi
 corpus et obtusis ceciderunt viribus artus,
 claudicat ingenium, delirat lingua, *labat* mens,
 omnia deficiunt atque uno tempore desunt. +
 ergo dissolui quoque convenit omnem animai 455
 naturam, ceu fumus, in altas aeris auras;
 quandoquidem gigni pariter pariterque videmus
 crescere et, *ut* docui, simul aevo fessa fatisci.
 3 Huc accedit uti videamus, corpus ut ipsum
 suscipere inmanis morbos durumque dolorem, 460
 sic animum curas acris luctumque metumque;
 quare participem leti quoque convenit esse.
 quin etiam morbis in corporis avius errat
 saepe animus; dementit enim delirique fatur
 interdumque gravi lethargo fertur in altum 465
 aeternumque soporem oculis nutuque cadenti,
 unde neque exaudit voces nec noscere voltus
 illorum potis est, ad vitam qui revocantes
 circumstant lacrimis rorantes ora genasque.

as children go about with a tottering and weakly body, so slender sagacity
 of mind follows along with it; then when their life has reached the
 maturity of confirmed strength, the judgment too is greater and the
 power of the mind more developed. Afterwards when the body has
 been shattered by the mastering might of time and the frame has drooped
 with its forces dulled, then the intellect halts, the tongue dotes, the mind
 gives away, all faculties fail and are found wanting at the same time.
 It naturally follows then that the whole nature of the soul is dissolved,
 like smoke, into the high air; since we see it is begotten along with the
 body and grows up along with it and, as I have shown, breaks down at
 the same time worn out with age.

3 Moreover we see that even as the body is liable to violent diseases and
 severe pain, so is the mind to sharp cares and grief and fear; it naturally
 follows therefore that it is its partner in death as well. Again in dis-
 eases of the body the mind often wanders and goes astray; for it loses
 its reason and drivels in its speech and often in a profound lethargy is
 carried into deep and never-ending sleep with drooping eyes and head;
 out of which it neither hears the voices nor can recognise the faces of
 those who stand round calling it back to life and bedewing with tears

quare animum quoque dissolui fateare necessest, 470
 quandoquidem penetrant in eum contagia morbi;
 nam dolor ac morbus leti fabricator uterquest,
 multorum exitio perdocti quod sumus ante.

4 denique quor, hominem cum vini vis penetravit 476
 acris et in venas discessit diditus ardor,
 consequitur gravitas membrorum, praepediuntur
 crura vacillanti, tardescit lingua, madet mens,
 nant oculi, (clamor singultus iurgia gliscunt,) 480
 et iam cetera de genere hoc quaecumque secuntur,
 cur ea sunt, nisi quod vemens violentia vini
 conturbare animam consuevit corpore in ipso?
 at quaecumque queunt conturbari inque pediri,
 significant, paulo si durius insinuarit 485
 causa, fore ut pereant aevo privata futuro.

6 quin etiam subito vi morbi saepe coactus
 ante oculos aliquis nostros, ut fulminis ictu,
 concidit et spumas agit, ingemit et tremit artus,
 desipit, extentat nervos, torquetur, anhelat 490
 inconstanter, et in iactando membra fatigat.
 - nimirum quia vis morbi distracta per artus
 - turbat, agens animam spumat, quasi in aequore salso

face and cheeks. Therefore you must admit that the mind too dissolves, since the infection of disease reaches to it; for pain and disease are both forgers of death: a truth we have fully learned ere now by the death of many. Again, when the pungent strength of wine has entered into a man and its spirit has been infused into and transmitted through his veins, why is it that a heaviness of the limbs follows along with it, his legs are hampered as he reels about, his tongue falters, his mind is besotted, his eyes swim, shouting hiccoughing wranglings are rife, together with all the other usual concomitants, why is all this, if not because the overpowering violence of the wine is wont to disorder the soul within the body? But whenever things can be disordered and hampered, they give token that if a somewhat more potent cause gained an entrance, they would perish and be robbed of all further existence. Moreover it often happens that some one constrained by the violence of disease suddenly drops down before our eyes, as by a stroke of lightning, and foams at the mouth, moans and shivers through his frame, stiffens his muscles, is racked, gasps for breath fitfully, and wearies his limbs with tossing. Sure enough, because the violence of the disease spreads itself through his frame and disorders him, he foams as he tries to eject his soul, just as in the salt sea the waters boil with the mastering might of

ventorum validis fervere viribus undae.
 exprimitur porro gemitus, quia membra dolore 495
 adficiuntur et omnino quod semina vocis
 eiciuntur et ore foras glomerata feruntur
 qua quasi consuerunt et sunt munita viai,
 desipientia fit, quia vis animi atque animai
 conturbatur et, ut docui, divisa seorsum 500
 disiectatur eodem illo distracta veneno.
 inde ubi iam morbi reflexit causa reditque
 in latebras acer corrupti corporis umor,
 tum quasi vacillans primum consurgit et omnis
 paulatim redit in sensus animamque receptat. 505
 haec igitur tantis ubi morbis corpore in ipso
 iactentur miserisque modis distracta laborent,
 cur eadem credis sine corpore in aere aperto
 cum validis ventis aetatem degere posse?
 et quoniam mentem sanari, corpus ut aegrum, 510
 cernimus et flecti medicina posse videmus,
 id quoque praesagit mortalem vivere mentem.
 addere enim partis aut ordine traiecere aecumst
 aut aliquid prosum de summa detrahare hilum,
 commutare animum quicumque adoritur et infit 515

the winds. A moan too is forced out, because the limbs are seized with pain, and mainly because seeds of voice are driven forth and are carried in a close mass out by the mouth, the road which they are accustomed to take and where they have a well-paved way. Loss of reason follows, because the powers of the mind and soul are disordered and, as I have shewn, are riven and forced asunder, torn to pieces by the same baneful malady. Then after the cause of the disease has bent its course back and the acrid humours of the distempered body return to their hiding-places, then he first gets up like one reeling, and by little and little comes back into full possession of his senses and regains his soul. Since therefore even within the body mind and soul are harassed by such violent distempers and so miserably racked by sufferings, why believe that they without the body in the open air can continue existence battling with fierce winds? And since we perceive that the mind is healed, like the sick body, and we see that it can be altered by medicine, this too gives warning that the mind has a mortal existence. For it is natural that whosoever essays and attempts to change the mind or seeks to alter any other nature you like, should add new parts or change the arrangement of the present, or at least withdraw some small fraction from the whole sum. But that which is immortal wills not to have its

aut aliam quamvis naturam flectere quaerit.
 at neque transfèrri sibi partis nec tribui vult
 immortale quod est quicquam neque defluere hilum.
 nam quodcumque suis mutatum finibus exit,
 continuo hoc mors est illius quod fuit ante. 520
 ergo animus sive aegrescit, mortalia signa
 mittit, uti docui, seu flectitur a medicina.
 usque adeo falsae rationi vera videtur
 res occurrere et effugium praecludere eunti
 ancipitique refutatu convincere falsum. 525

Denique saepe hominem paulatim cernimus ire
 et membratim vitalem deperdere sensum;
 in pedibus primum digitos livescere et unguis.
 inde pedes et crura mori, post inde per artus
 ire alios tractim gelidi vestigia leti. 530
 scinditur itque animae hoc quoniam natura nec uno
 tempore sincera existit, mortalis habendast.
 quod si forte putas ipsam se posse per artus
 introsum trahere et partis conducere in unum
 atque ideo cunctis sensum deducere membris, 535
 at locus ille tamen, quo copia tanta animai
 cogitur, in sensu debet maiore videri;
 qui quoniam nusquamst, nimirum ut diximus *ante*,

parts transposed nor any addition to be made nor one tittle to ebb away; for whenever a thing changes and quits its proper limits, this change is at once the death of that which was before. Therefore the mind, whether it is sick or whether it is altered by medicine, alike, as I have shewn, gives forth mortal symptoms. So invariably is truth found to make head against false reason and to cut off all retreat from the assailant and by a two-edged refutation to put falsehood to rout.

Again we often see a man pass gradually away and limb by limb lose vital sense; first the toes of his feet and the nails turn livid, then the feet and shanks die, then next the steps of chilly death creep with slow pace over the other members. Since in this way the nature of the soul is rent and passes away and comes not forth all at once in its entirety, it must be reckoned mortal. But if haply you suppose that it can draw itself in through the whole frame and mass its parts together and in this way withdraw sense from all the limbs, yet then that spot into which so great a store of soul is gathered, ought to shew itself in possession of a greater amount of sense. But as this is nowhere found, sure enough as we said before, it is torn in pieces and scattered abroad, and therefore

dilaniata foras dispargitur, interit ergo.

quin etiam si iam libeat concedere falsum

540

et dare posse animam glomerari in corpore eorum,

lumina qui lincunt moribundi particulatim,

mortalem tamen esse animam fateare necesse,

nec refert utrum pereat dispersa per auras

an contracta suis e partibus obbrutescat,

545

quando hominem totum magis ac magis undique sensus

deficit et vitae minus et minus undique restat.

Et quoniam mens est hominis pars una, loco quae

fixa manet certo, velut aures atque oculi sunt

atque alii sensus qui vitam cumque gubernant,

550

et veluti manus atque oculus naresve seorsum

secreta ab nobis nequeunt sentire neque esse,

sed tamen in parvo licuntur tempore tabe,

sic animus per se non quit sine corpore et ipso

esse homine, illius quasi quod vas esse videtur

555

sive aliud quid vis potius coniunctius ei

figere, quandoquidem conexu corpus adhaeret.

Denique corporis atque animi vivata potestas

inter se coniuncta valent vitaeque fruuntur;

nec sine corpore enim vitalis edere motus

560

sola potest animi per se natura nec autem

dies. Moreover if I were pleased for the moment to grant what is false and admit that the soul might be collected in one mass in the body of those who leave the light dying piecemeal, even then you must admit the soul to be mortal; and it makes no difference whether it perish dispersed in air, or gathered into one lump out of all its parts lose all feeling, since sense ever more and more fails the whole man throughout and less and less of life remains throughout.

And since the mind is one part of a man which remains fixed in a particular spot, just as are the ears and eyes and the other senses which guide and direct life; and just as the hand or eye or nose when separated from us cannot feel and exist apart, but in ~~however short a time~~ waste away in putrefaction, thus the mind cannot exist by itself without the body and the man's self which as you see serves for the mind's vessel or any thing else you choose to imagine which implies a yet closer union with it, since the body is attached to it by the nearest ties.

Again the quickened power of body and mind by their joint partnership enjoy health and life; for the nature of the mind cannot by itself alone without the body give forth vital motions nor can the body again

cassum anima corpus durare et sensibus uti.
 scilicet avolsus radicibus ut nequit ullam
 dispicere ipse oculus rem seorsum corpore toto,
 sic anima atque animus per se nil posse videtur.
 nimirum quia *per* venas et viscera mixtim,
 per nervos atque ossa, tenentur corpore ab omni
 nec magnis intervallis primordia possunt
 libera dissultare, ideo conclusa moventur
 sensiferos motus quos extra corpus in auras
 aeris haut possunt post mortem eiecta moveri
 propterea quia non simili ratione tenentur.
 corpus enim atque animans erit aer, si cohibere
 sese anima atque in eo poterit concludere motus
 quos ante in nervis et in ipso corpore agebat.
 quare etiam atque etiam resoluta corporis omni
 tegmine et eiectis extra vitalibus auras
 dissolui sensus animi fateare necessest
 atque animam, quoniam coniunctast causa duobus.

Denique cum corpus nequeat perferre animai
 discidium quin in taetro tabescat odore,
 quid dubitas quin ex imo penitusque coorta
 emanarit uti fumus diffusa animae vis,

bereft of the soul continue to exist and make use of its senses: just as the eye is to know, as the eye itself torn away from its roots cannot see any thing when apart from the whole body, thus the soul and mind cannot do anything by themselves. Sure enough, because mixed up through veins and flesh, sinews and bones, their first-beginnings are confined by all the body and are not free to bound away leaving spaces between, therefore thus shut in they make those sense-motions which they cannot make after death when forced out of the body into the air by reason that they are not then confined in the same manner; for the air will be a body and a living thing, if the soul be able to keep itself together and to enclose in it those motions which it used before to perform in the sinews and within the body. The same again and again I say, when the enveloping body has been all broken up and the vital airs have been forced out, you must admit that the body of the mind and the soul are dissolved, since the cause of destruction is one and inseparable for both body and soul.

Again since the body is unable to bear the separation of the soul without rotting away in a noisome stench, why doubt that the power of the soul gathering itself up from the inmost depths of body has occasioned

atque ideo tanta mutatum putre ruina
 conciderit corpus, penitus quia mota loco sunt 585
 fundamenta, foras anima emanante per artus
 perque viarum omnis flexus, in corpore qui sunt
 que foramina? multimodis ut noscere possis
 dispersitam animae naturam exisse per artus
 et prius esse sibi distractam corpore in ipso, 590
 quam prolapsa foras enaret in aeris auras.
 Quin etiam finis dum vitae vertitur intra,
 saepe aliqua tamen e causa labefacta videtur
 hic anima ac toto solui de corpore *velle*
 et quasi supremo languescere tempore voltus 595
 molliaque exsanguī *trunco* cadere omnia membra.
 quod genus est, animo male factum cum perhibetur
 aut animam liquisse; ubi iam trepidatur et omnes
 extremum cupiunt vitae repraehendere vinculum.
 conquassatur enim tum mens animaeque potestas 600
 omnis et haec ipso cum corpore conlabefiunt;
 ut gravior paulo possit dissolvere causa.
 quid dubitas tandem quin extra prodita corpus
 excilla foras in aperto, tegmine dempto,
 non modo non omnem possit durare per aevom, 605

and disposed like smoke, and that the crumbling body has changed and
 crumbled up with so total a ruin for this reason because its foundations
 are stirred throughout their place, the soul oozing out abroad through
 the frame, through all the winding passages which are in the body, and
 all openings? so that in ways manifold you may learn that the nature
 of the soul has been divided piecemeal and gone forth throughout the
 frame, and that it has been first torn to shreds within the body, ere it
 is driven forth and swam out into the air. Moreover even while it yet
 remains within the confines of life, often the soul shaken from some cause or
 set on fire to wish to pass out and be loosed from the whole body, the
 features are seen to droop as at the last hour and all the limbs to sink
 dead on the bloodless trunk: just as happens, when the phrase is
 used, the mind is in a bad way, or the soul is quite gone; when all is
 hurry and every one is anxious to keep from parting the last tie of life;
 for then the mind and the power of the soul are shaken throughout and
 both are quite loosened together with the body; so that a cause some-
 what more powerful can quite break them up. Why doubt, I would
 ask, that the soul when driven forth out of the body, when in the open
 air, feeling as it is, stript of its covering, not only cannot continue

sed minimum quodvis nequeat consistere tempus?]
 nec sibi enim quisquam moriens sentire videtur
 ire foras animam incolumem de corpore toto
 nec prius ad iugulum et supera succedere fauces,
 verum deficere in certa regione locatam; 610
 ut sensus alios in parti quemque sua scit
 dissolui. quod si immortalis nostra foret mens,
 non tam se moriens dissolvi conquereretur,
 sed magis ire foras vestemque relinquere, ut anguis. 577-106

Denique cur animi numquam mens consiliumque 615
 gignitur in capite aut pedibus manibusve, sed unis
 sedibus et certis hominis regionibus haeret,
 si non certa loca ad nascendum reddita cuique
 sunt, et ubi quicquid possit durare creatum,
 atque ita multimodis partitis artubus esse, 620
 membrorum ut numquam existat praeposterus ordo?
 usque adeo sequitur res rem neque flamma creari
 fluminibus solitast neque in igni gignier algor.

Praeterea si immortalis natura animaist
 et sentire potest secreta a corpore nostro, 625
 quinque, ut opinor, eam faciundum est sensibus auctam;
 nec ratione alia nosmet proponere nobis
 possumus infernas animas Acherunte vagari.

through eternity, but is unable to hold together the smallest fraction of time? No one when dying appears to feel the soul go forth entire from his whole body or first mount up to the throat and gullet, but all feel it fail in that part which lies in a particular quarter; just as they know that other senses suffer dissolution each in its own place. But if our mind were immortal, it would not when dying complain so much of its dissolution, as of passing abroad and quitting its vesture, like a snake.

Again why are the mind's understanding and judgment never begotten in the head or feet or hands, but cling to one spot and fixed quarter of the man, if it be not that particular places are assigned for the birth of each part, and for the abode of each after it is born, that thus the members may be distributed with such a manifold organisation of parts, that no perverted arrangement of them shall ever show itself? so invariably effect follows cause, nor is flame wont to be born in rivers nor cold in fire.

Again if the nature of the soul is immortal and can feel when separated from our body, methinks we must suppose it to be provided with five senses; and in no other way can we picture to ourselves souls below flitting about Acheron. Painters therefore and former genera-

pictores itaque et scriptorum saecula priora
 sic animas intro duxerunt sensibus auctas. 630
 at neque sorsum oculi neque nares nec manus ipsa
 esse potest animae neque sorsum lingua, neque aures
 auditu per se possunt sentire neque esse.

Et quoniam toto sentimus corpore inesse
 vitalem sensum et totum esse animale videmus, 635
 si subito medium celeri praeciderit ictu
 vis aliqua ut sorsum partem secernat utramque,
 dispertita procul dubio quoque vis animai
 et discissa simul cum corpore dissicietur.
 at quod scinditur et partis discedit in ullas, 640
 scilicet aeternam sibi naturam abnuat esse.
 falciferos memorant currus abscidere membra
 saepe ita de subito permixta caede calentis,
 ut tremere in terra videatur ab artubus id quod
 decedit abscisum, cum mens tamen atque hominis vis 645
 mobilitate mali non quit sentire dolorem;
 et semel in pugnae studio quod dedita mens est,
 corpore reliquo pugnam caedesque petessit,
 nec tenet amissam laevam cum tegmine saepe
 inter equos abstraxe rotas falcesque rapaces, 650
 nec cecidisse alius dextram, cum scandit et instat.

tions of writers have thus represented souls provided with senses. But neither eyes nor nose nor hand can exist for the soul apart from the body nor can tongue, nor can ears perceive by the sense of hearing or exist for the soul by themselves apart from the body.

And since we perceive that vital sense is in the whole body and we see that it is all endowed with life, if on a sudden any force with swift blow shall have cut it in twain so as quite to dissever the two halves, the power of the soul will without doubt at the same time be cleft and cut asunder and dashed in twain together with the body. But that which is cut and divides into any parts, you are to know renounces for itself an everlasting nature. Stories are told how scythed chariots reeking with indiscriminate slaughter often lop off limbs so instantaneously that that which has fallen down lopped off from the frame is seen to quiver on the ground, while yet the mind and faculty of the man from the suddenness of the mischief cannot feel the pain; and because his mind once for all is wholly given to the business of fighting, with what remains of his body he mingles in the fray and carnage, and often perceives not that the wheels and devouring scythes have carried off among the horses' feet his left arm shield and all; another sees not that

inde alius conatur adempto surgere crure,
 cum digitos agit at propter moribundus humi pes.
 et caput abscisum calido viventeque trunco
 servat humi voltum vitalem oculosque patentis, 655
 donec reliquias animai reddidit omnes.
 quin etiam tibi si, lingua vibrante, micanti
 serpentis cauda e procero corpore, utrumque
 sit libitum in multas partis discidere ferro,
 omnia iam sorsum cernes ancisa recenti 660
 volnere tortari et terram conspargere tabo,
 ipsam seque retro partem petere ore priorem,
 volneris ardenti ut morsu premat icta dolorem.
 omnibus esse igitur totas dicemus in illis
 particulis animas? at ea ratione sequetur 665
 unam animantem animas habuisse in corpore multas.
 ergo divisast ea quae fuit una simul cum
 corpore; quapropter mortale utrumque putandumst,
 in multas quoniam partis disciditur aequae.
 Praeterea si immortalis natura animai 670
 constat et in corpus nascentibus insinuat,ur,
 cur super anteactam aetatem meminisse nequimus
 nec vestigia gestarum rerum ulla tenemus?

his right arm has dropped from him, while he mounts and presses forward. Another tries to get up after he has lost his leg, while the dying foot quivers with its toes on the ground close by. The head too when cut off from the warm and living trunk retains on the ground the expression of life and open eyes, until it has delivered up all the remnants of soul. To take another case, if, as a serpent's tongue is quivering, as its tail is darting out from its long body, you choose to chop with an axe into many pieces both tail and body, you will see all the separate portions thus cut off writhing under the fresh wound and bespattering the earth with gore, the fore part with the mouth making for its own hinder part, to allay with burning bite the pain of the wound with which it has been smitten. Shall we say then that there are entire souls in all those pieces? why from that argument it will follow that one living creature had many souls in its body; and this being absurd, therefore the soul which was one has been divided together with the body; therefore each alike must be reckoned mortal, since each is alike chopped up into many pieces.

Again if the nature of the soul is immortal and makes its way into our body at the time of birth, why are we unable to remember besides the time already gone, and why do we retain no traces of past actions?

nam si tanto operest animi mutata potestas,
 omnis ut actarum exciderit retinentia rerum, 675
 non, ut opinor, id a leto iam longiter errat;
 quapropter fateare necessest quae fuit ante
 interiisse et quae nunc est nunc esse creatam.

Praeterea si iam perfecto corpore nobis
 inferri solitast animi vivata potestas 680
 tum cum gignimur et vitae cum limen inimus,
 haud ita conveniebat uti cum corpore et una
 cum membris videatur in ipso sanguine cresse,
 sed velut in cavea per se sibi vivere solam.

CONVENIT UT SENSU CORPUS TAMEN AFFLUAT OMNE 685
 690 quod fieri totum contra manifesta docet res;
 namque ita conexa est per venas viscera nervos
 ossaque, uti dentes quoque sensu participantur;
 morsus ut indicat et gelidai stringor aquai
 et lapis oppressus, subiit si e frugibus, asper. 690
 686 quare etiam atque etiam neque originis esse putandumst
 expertis animas nec leti lege solutas.
 nam neque tanto opere adnecti potuisse putandumst
 689 corporibus nostris extrinsecus insinuatatas,
 nec, tam contextae cum sint, exire videntur 695
 incolumes posse et salvas exsolvere sese

If the power of the mind has been so completely changed, that all remembrance of past things is lost, that methinks differs not widely from death; therefore you must admit that the soul which was before has perished and that which now is has now been formed.

Again if the quickened power of the mind is wont to be put into us after our body is fully formed, at the instant of our birth and our crossing the threshold of life, it ought agreeably to this to live not in such a way as to seem to have grown with the body and together with its members within the blood, but in a den apart to and by itself: the very contrary to what undoubted fact teaches; for it is so closely united with the body throughout the veins flesh sinews and bones, that the very teeth have a share of sense; as the act of biting proves and the sharp twinge of cold water and the crunching of a rough stone, when it has got into them out of bread. Wherefore, again and again I say, we must believe souls to be neither without a birth nor exempted from the law of death; for we must not believe that they could have been so completely united with our bodies, if they found their way into them from without, nor, since they are so closely inwoven with them, does it appear that they can get out unharmed and unloose themselves without destruction from

omnibus e nervis atque ossibus articulisque.
 quod si forte putas extrinsecus insinuatam
 permanare animam nobis per membra solere,
 tanto quique magis cum corpore fusa peribit. 700
 quod permanat enim dissolvitur, interit ergo.
 dispertitus enim per caulas corporis omnis
 ut cibus, in membra atque artus cum diditur omnis,
 disperit atque aliam naturam sufficit ex se,
 sic anima atque animus quamvis integra recens in 705
 corpus eunt, tamen in manando dissoluuntur,
 dum quasi per caulas omnis diduntur in artus
 particulae quibus haec animi natura creatur,
 quae nunc in nostro dominatur corpore nata
 ex illa quae tum periit partita per artus. 710
 quapropter neque natali privata videtur
 esse die natura animae nec funeris expers.

Semina praeterea linquuntur necne animai
 corpore in exanimo? quod si lincuntur et insunt,
 haut erit ut merito immortalis possit haberi, 715
 partibus amissis quoniam libata recessit.
 sin ita sinceris membris ablata profugit
 ut nullas partis in corpore liquerit ex se,
 unde cadavera rancenti iam viscere vermes

all the sinews and bones and joints. But if haply you believe that the soul finds its way in from without and is wont to ooze through all our limbs, so much the more it will perish thus blended with the body; for what oozes through another is dissolved, and therefore dies. As food distributed through all the cavities of the body, while it is transmitted into the limbs and the whole frame, is destroyed and furnishes out of itself the matter of another nature, thus the soul and mind, though they pass entire into a fresh body, yet in oozing through it are dissolved, whilst there are transmitted so to say into the frame through all the cavities those particles of which this nature of mind is formed, which now is sovereign in our body, being born out of that soul which then perished when dispersed through the frame. Wherefore the nature of the soul is seen to be neither without a birthday nor exempt from death.

Again are seeds of the soul left in the dead body or not? If they are left and remain in it, the soul cannot fairly be deemed immortal, since it has withdrawn lessened by the loss of some parts; but if when taken away it has fled forth with its members so entire that it has left in the body no parts of itself, whence do carcasses exude worms from the

expirant atque unde animantum copia tanta 720
 exos et exanguis tumidos perfluctuat artus?
 quod si forte animas extrinsecus insinuari
 vermibus et privas in corpora posse venire
 credis nec reputas cur milia multa animarum
 convenient unde una recesserit, hoc tamen est ut 725
 quaerendum videatur et in discrimen agendum,
 utrum tandem animae venentur semina quaeque
 vermiculorum ipsaeque sibi fabricentur ubi sint,
 an quasi corporibus perfectis insinuentur.
 at neque cur faciant ipsae quareve laborent 730
 dicere suppeditat. neque enim, sine corpore cum sunt,
 sollicitae volitant morbis alguque fameque;
 corpus enim magis his vitiis adfine laborat
 et mala multa animus contage fungitur eius.
 sed tamen his esto quamvis facere utile corpus, 735
 cum subeant; at qua possint via nulla videtur.
 haut igitur faciunt animae sibi corpora et artus.
 nec tamen est quidum perfectis insinuentur
 corporibus; neque enim poterunt suptiliter esse
 conexae neque consensus contagia fient. 740

Denique cur acris violentia triste leonum

now rank flesh and whence does such a swarm of living things, boneless
 and bloodless, surge through the heaving frame? But if haply you be-
 lieve that souls find their way into worms from without and can severally
 pass each into a body and you make no account of why many thousands
 of souls meet together in a place from which one has withdrawn, this
 question at least must, it seems, be raised and brought to a decisive test,
 whether souls hunt out the several seeds of worms and build for them-
 selves a place to dwell in, or find their way into bodies fully formed so
 to say. But why they should on their part make a body or take such
 trouble, cannot be explained; since being without a body they are not
 plagued as they flit about with diseases and cold and hunger: the body
 indeed is more akin to, more troubled by such infirmities, and by its
 contact with it the mind suffers many ills. Nevertheless be it ever so
 expedient for them to make a body, when they are going to enter, yet
 clearly there is no way by which they can so do. Therefore souls do
 not make for themselves bodies and limbs; no nor is there any mode
 by which they can find their way into bodies after they are fully formed;
 for they will neither be able to unite themselves with a nice precision
 nor will any connexion of mutual sensation be formed between them.

Again why does untamed fierceness go along with the sullen brood

seminium sequitur, volpes dolus, et fuga cervos,
 A PATRIBUS DATUR ET A PATRIUS PAVOR INCITAT ARTUS
 et iam cetera de genere hoc cur omnia membris
 ex ineunte aevo generascunt ingenioque, 745
 si non, certa suo quia semine seminioque
 vis animi pariter crescit cum corpore toto?
 quod si immortalis foret et mutare soleret
 corpora, permixtis animantes moribus essent,
 effugeret canis Hyrcano de semine saepe 750
 cornigeri incursum cervi tremaretque per auras
 aeris accipiter fugiens veniente columba,
 desiperent homines, saperent fera saecula ferarum.
 illud enim falsa fertur ratione quod aiunt
 inmortalem animam mutato corpore flecti. 755
 quod mutatur enim dissolvitur, interit ergo;
 traiciuntur enim partes atque ordine migrant;
 quare dissolui quoque debent posse per artus,
 denique ut intereant una cum corpore cunctae.
 sin animas hominum dicent in corpora semper 760
 ire humana, tamen quaeram cur e sapienti
 stulta queat fieri, nec prudens sit puer ullus
 nec tam doctus equae pullus quam fortis equi vis.
 scilicet in tenero tenerascere corpore mentem 765

of lions, cunning with foxes and proneness to flight with stags? and to take any other instance of the kind, why are all qualities engendered in the limbs and temper from the very commencement of life, if not because a fixed power of mind derived from its proper seed and breed grows up together with the whole body? If it were immortal and wont to pass into different bodies, living creatures would be of interchangeable dispositions; a dog of Hyrcanian breed would often fly before the attack of an antlered stag, a hawk would cower in mid air as it fled at the approach of a dove, men would be without reason, the savage races of wild-beasts would have reason. For the assertion that an immortal soul is altered by a change of body is advanced on a false principle. What is changed, is dissolved, and therefore dies: the parts are transposed and quit their former order; therefore they must admit of being dissolved throughout the frame, in order at last to die one and all together with the body. But if they shall say that souls of men always go into human bodies, I yet will ask how it is a soul can change from wise to foolish, and no child has discretion, and why the mare's foal is not so well trained as the powerful strength of the horse. You may be sure they will fly to the subterfuge that the mind grows weakly in a weakly body. But

confugient. quod si iam fit, fateare necessest
 mortalem esse animam, quoniam mutata per artus
 tanto opere amittit vitam sensumque priorem.
 quove modo poterit pariter cum corpore quoque
 confirmata cupitum aetatis tangere florem 770
 vis animi, nisi erit consors in origine prima?
 quidve foras sibi vult membris exire senectis?
 an metuit conclusa manere in corpore putri
 et domus aetatis spatio ne fessa vetusto
 obruat? at non sunt immortalī ulla pericla. 775

Denique conubia ad Veneris partusque ferarum
 esse animas praesto deridiculum esse videtur,
 expectare immortalis mortalia membra
 innumero numero certareque praeproperanter
 inter se quae prima potissimaque insinuetur; 780
 si non forte ita sunt animarum foedera pacta
 ut quae prima volans advenerit insinuetur
 prima neque inter se contendant viribus hilum.

Denique in aethere non arbor, non aequore in alto
 nubes esse queunt nec pisces vivere in arvis 785
 nec cruor in lignis neque saxis sucus inesse.
 certum ac dispositumst ubi quicquid crescat et insit.
 sic animi natura nequit sine corpore oriri

granting this is so, you must admit the soul to be mortal, since changed so completely throughout the frame it loses its former life and sense. Then too, in what way will it be able to grow in strength uniformly with its allotted body and reach the coveted flower of age, unless it shall be its partner at its first beginning? or what means it by passing out from the limbs when decayed with age? Does it fear to remain shut up in a crumbling body, fear that its tenement, worn out by protracted length of days, bury it in its ruins? Why an immortal being incurs no risks.

Again for souls to stand by at the unions of Venus and the birth-throes of beasts seems to be passing absurd, for them the immortals to wait for mortal limbs in number numberless and struggle with one another in forward rivalry, which shall first and by preference have entrance in; unless haply bargains are struck among the souls on these terms, that whichever in its flight shall first come up, shall first have right of entry, and that they shall make no trial at all of each other's strength.

Again a tree cannot exist in the ether, nor clouds in the deep sea nor can fishes live in the fields nor blood exist in woods nor sap in stones. Where each thing can grow and abide is fixed and ordained. Thus the nature of the mind cannot come into being alone without the

sola neque a nervis et sanguine longiter esse.
 quod si (posset enim multo prius) ipsa animi vis 790
 in capite aut umeris aut imis calcibus esse
 posset et innasci quavis in parte, soleret
 tandem in eodem homine atque in eodem vase manere.
 quod quoniam nostro quoque constat corpore certum
 dispositumque videtur ubi esse et crescere possit 795
 sorsum anima atque animus, tanto magis infitiandum
 totum posse extra corpus durare genique.
 quare, corpus ubi interiit, periisse necessest
 confiteare animam distractam in corpore toto.
 quippe etenim mortale aeterno iungere et una 800
 consentire putare et fungi mutua posse
 desiperest; quid enim diversius esse putandumst
 aut magis inter se disiunctum discrepitansque,
 quam mortale quod est immortali atque perenni
 iunctum in concilio saevas tolerare procellas? 805
 quod si forte ideo magis immortalis habendast, 819
 quod letalibus ab rebus munita tenetur,
 aut quia non veniunt omnino aliena salutis
 aut quia quae veniunt aliqua ratione recedunt
 pulsa prius quam quid noceant sentire queamus,

body nor exist far away from the sinews and blood. But if (for this would be much more likely to happen than that) the force itself of the mind might be in the head or shoulders or heels or might be born in any other part of the body, it would after all be wont to abide in one and the same man or vessel. But since in our body even it is fixed and seen to be ordained where the soul and the mind can severally be and grow, it must still more strenuously be denied that it can abide and be born out of the body altogether. Therefore when the body has died, we must admit that the soul has perished, wrenched away throughout the body. To link forsooth a mortal thing with an everlasting and suppose that they can have sense in common and can be reciprocally acted upon, is sheer folly; for what can be conceived more incongruous, more discordant and inconsistent with itself, than a thing which is mortal, linked with an immortal and everlasting thing, trying in such union to weather furious storms? But if the soul is to be accounted immortal for this reason rather, because it is kept sheltered from death-bringing things, either because things hostile to its existence do not approach at all, or because those which do approach, in some way or other retreat discomfited before we can feel the harm they do, [manifest experience proves that

praeter enim quam quod morbis cum corporis aegret,
 advenit id quod eam de rebus saepe futuris 825
 macerat inque metu male habet curisque fatigat
 praeteritisque male admissis peccata remordent.
 adde furorem animi proprium atque oblivia rerum,
 adde quod in nigras lethargi mergitur undas.
 Nil igitur mors est ad nos neque pertinet hilum, 830
 quandoquidem natura animi mortalis habetur,
 et velut anteacto nil tempore sensimus aegri,
 ad configendum venientibus undique Poenis,
 omnia cum belli trepido concussa tumultu
 horrida contremuere sub altis aetheris oris, 835
 in dubioque fuere utrorum ad regna cadendum
 omnibus humanis esset terraque marique,
 sic, ubi non erimus, cum corporis atque animai
 discidium fuerit quibus e sumus uniter apti,
 scilicet haud nobis quicquam, qui non erimus tum, 840
 accidere omnino poterit sensumque movere,
 non si terra mari miscebitur et mare caelo.
 et si iam nostro sentit de corpore postquam
 distractast animi natura animaeque potestas,
 nil tamen est ad nos qui computu coniugioque 845

this can not be true]. For besides that it sickens in sympathy with the
 maladies of the body, it is often attacked by that which frets it on the
 score of the future and keeps it on the rack of suspense and wears it out
 with cares, remorse for sins gnawing it on account of past misdeeds :
 then there is madness peculiar to the mind and forgetfulness of all
 things ; then too it often sinks into the black waters of lethargy.

Death therefore is nothing and concerns us not a jot, since the
 nature of the mind is proved to be immortal. And as in time gone by
 we felt no distress, when the Poeni from all sides came together to do
 battle, and all things shaken by war's troublous uproar shuddered and
 quaked beneath high heaven, and mortal men were in doubt which of
 the two peoples it should be to whose empire all must fall by sea and
 land alike, thus when we shall be no more, when there shall have been
 a separation of body and soul, out of both of which we are each formed
 into a single being, to us, you may be sure, who then shall be no more,
 nothing whatever can happen to excite sensation, not if earth shall be
 mingled with sea and sea with heaven. And even supposing the nature
 of the mind and power of the soul do feel, after they have been severed
 from our body, yet that is nothing to us who by the binding tie of

corporis atque animae consistimus uniter apti.
 nec, si materiem nostram collegerit aetas
 post obitum rursumque redegerit ut sita nunc est
 atque iterum nobis fuerint data lumina vitae,
 pertineat quicquam tamen ad nos id quoque factum, 850
 interrupta semel cum sit repetentia nostri.
 et nunc nil ad nos de nobis attinet, ante
 qui fuimus, *neque* iam de illis nos adficit angor.
 nam cum respicias inmensi temporis omne
 praeteritum spatium, tum motus materiai 855
 multimodis quam sint, facile hoc adcredere possis,
 semina saepe in eodem, ut nunc sunt, ordine posta
 865 haec eadem, quibus e nunc nos sumus, ante fuisse,
 858 nec memori tamen id quimus repraehendere mente;
 inter enim iectast vitae pausa vageque 860
 deerrarunt passim motus ab sensibus omnes.
 debet enim, misere si forte aegreque futurumst,
 ipse quoque esse in eo tum tempore, cui male possit
 accidere. id quoniam mors eximit, esseque probet
 864 illum cui possint incommoda conciliari, 865
 scire licet nobis nil esse in morte timendum
 nec miserum fieri qui non est posse neque hilum

marriage between body and soul are formed each into one single being. And if time should gather up our matter after our death and bring it once more into the condition in which it now is, and the light of life be given to us again, this result even would concern us not at all, when the chain of our self-consciousness has once been snapped asunder. So now we give ourself no concern about any self which we have been before, nor do we feel any distress on the score of that self. For when you look back on the whole past course of immeasurable time and think how manifold are the shapes which the motions of matter take, you may easily credit this too, that these very same seeds of which we now are formed, have often before been placed in the same order in which they now are; and yet we cannot recover this in memory: a break in our existence has been interposed, and all the motions have wandered to and fro far astray from the sensations they produced. For he whom evil is to befall, must in his own person exist at the very time it comes, if the misery and suffering are haply to have any place at all; but since death precludes this, and forbids him to be, upon whom the ills can be brought, you may be sure that we have nothing to fear after death, and that he who exists not, cannot become miserable, and that it matters not a whit

differre anne ullo fuerit iam tempore natus,
mortalem vitam mors cum immortalis ademit.

Proinde ubi se videas hominem indignarier ipsum, 870
post mortem fore ut aut putescat corpore posto
aut flammis interfiat malisve ferarum,
scire licet non sincerum sonere atque subesse
caecum aliquem cordi stimulum, quamvis neget ipse
credere se quemquam sibi sensum in morte futurum. 875
non, ut opinor, enim dat quod promittit et unde,
nec radicitus e vita se tollit et eicit,
(sed facit esse sui quiddam super inscius ipse.)
vivid enim sibi cum proponit quisque futurum,
corpus uti volucres lacerent in morte feraeque, 880
ipse sui miseret; neque enim se dividit illim,
nec removet satis a proiecto corpore et illum
se fingit sensuque suo contaminat astans.
hinc indignatur se mortalem esse creatum
nec videt in vera nullum fore morte alium se 885
(qui possit vivid sibi se lugere peremptum)
stansque iacentem se lacerari urive dolere.
nam si in morte malumst malis morsuque ferarum

whether he has been born into life at any other time, when immortal death has taken away his mortal life.

Therefore when you see a man bemoaning his hard case, that after death he shall either rot with his body laid in the grave or be devoured by flames or the jaws of wild-beasts, you may be sure that his ring betrays a flaw and that there lurks in his heart a secret goad, though he himself declare that he does not believe that any sense will remain to him after death. He does not methinks really grant the conclusion which he professes to grant nor the principle on which he so professes, nor does he take and force himself root and branch out of life, but all unconsciously imagines something of self to survive. For when any one in life suggests to himself that birds and beasts will rend his body after death, he makes moan for himself: he does not separate himself from that self, nor withdraw himself fully from the body so thrown out, and fancies himself that other self and stands by and impregnates it with his own sense. Hence he makes much moan that he has been born mortal, and sees not that after real death there will be no other self to remain in life and lament to self that his own self has met death, and there to stand and grieve that his own self there lying is mangled or burnt. For if it is an evil after death to be pulled about by the devouring jaws of

tractari, non invenio qui non sit acerbum
 ignibus inpositum calidis torrescere flammis 890
 aut in melle situm suffocari atque rigere
 frigore, cum summo gelidi cubat aequore saxi,
 urgerive superne obtritum pondere terrae.
 'Iam iam non domus accipiet te laeta, neque uxor
 optima, nec dulces occurrent oscula nati 895
 praeripere et tacita pectus dulcedine tangent.
 non poteris factis florentibus esse, tuisque
 praesidium. misero misere' aiunt 'omnia ademit
 una dies infesta tibi tot praemia vitae.'
 illud in his rebus non addunt 'nec tibi earum 900
 iam desiderium rerum super insidet una.'
 quod bene si videant animo dictisque sequantur,
 dissoluant animi magno se angore metuque.
 'tu quidem ut es leto sopitus, sic eris aevi
 quod superest cunctis privatu' doloribus aegris; 905
 at nos horrifico cinefactum te prope busto
 insatiabiliter deflevimus, aeternumque
 nulla dies nobis maerorem e pectore demet.'
 illud ab hoc igitur quaerendum est, quid sit amari

wild-beasts, I cannot see why it should not be a cruel pain to be laid on fires and burn in hot flames, or to be placed in honey and stifled, or to stiffen with cold, stretched on the smooth surface of a cold slab of stone, or to be pressed down and crushed by a load of earth from above.

'Now no more shall thy house admit thee with glad welcome, nor a most virtuous wife and sweet children run to be the first to snatch kisses and touch thy heart with a silent joy. No more mayst thou be prosperous in thy doings, a safeguard to thine own. One disastrous day has taken from thee luckless man in luckless wise all the many prizes of life.' This do men say; but add not thereto 'and now no longer does any craving for these things beset thee withal.' For if they could rightly perceive this in thought and follow up the thought in words, they would release themselves from great distress and apprehension of mind. 'Thou, even as now thou art, sunk in the sleep of death, shalt continue so to be all time to come, freed from all distressful pains; but we with a sorrow that would not be sated wept for thee, when close by thou didst turn to an ashen hue on thy appalling funeral pile, and no length of days shall pluck from our hearts our ever-during grief.' This question therefore should be asked of this speaker, what there is in it so

tanto opere, ad somnum si res redit atque quietem, 910
cur quisquam aeterno possit tabescere luctu.

Hoc etiam faciunt ubi discubuere tenentque
pocula saepe homines et inumbrant ora coronis,
ex animo ut dicant 'brevis hic est fructus homullis ;
iam fuerit neque post umquam revocare licebit.' 915
tamquam in morte mali cum primis hoc sit eorum,
quod sitis exurat miseros atque arida torres,
aut aliae cuius desiderium insideat rei.
nec sibi enim quisquam tum se vitamque requirit,
cum pariter mens et corpus sopita quiescunt ; 920
nam licet aeternum per nos sic esse soporem,
nec desiderium nostri nos adficit ullum.
et tamen haudquaquam nostros tunc illa per artus
longe ab sensiferis primordia motibus errant,
cum correptus homo ex somno se colligit ipse. 925
multo igitur mortem minus ad nos esse putandumst,
si minus esse potest quam quod nil esse videmus ;
maior enim turbae disiectus material
consequitur leto nec quisquam expergitus exstat,
frigida quem semel est vitae pausa secuta. 930

Denique si vocem rerum natura repente

passing bitter, if it come in the end to sleep and rest, that any one should pine in never-ending sorrow.

This too men often, when they have reclined at table and shade their brows with crowns, love to say from the heart, 'short is this enjoyment for poor weak men ; presently it will have been and never after may it be called back.' As if after their death it is to be one of their chiefest afflictions that thirst and parching drought is to burn them up hapless wretches, or a craving for any thing else is to beset them. What folly ! for no one feels the want of himself and life at the time when mind and body are together sunk in sleep ; for all we care this sleep might be everlasting, no craving whatever for ourselves then moves us. And yet by no means do those first-beginnings throughout our frame wander at that time far away from their sense-producing motions, when a man starts up from sleep and collects himself at once. Death therefore must be supposed to concern us much less, if less there can be than what we see to be nothing ; for a greater dispersion of the mass of matter follows in the train of death, and no one wakes up, upon whom the chill cessation of life has once come.

Once more, if the nature of things could suddenly utter a voice and

mittat et hoc alicui nostrum sic increpet ipsa
 'quid tibi tanto operest, mortalis, quod nimis aegris
 luctibus indulges? quid mortem congemis ac fles?
 nam gratis anteacta fuit tibi vita priorque 935
 et non omnia pertusum congesta quasi in vas
 commoda perfluxere atque ingrata interiere:
 cur non ut plenus vitae conviva recedis
 aequo animoque capis securam, stulte, quietem?
 sin ea quae fructus cumque es periere profusa 940
 vitaeque in offensust, cur amplius addere quaeris,
 rursum quod pereat male et ingratum occidat omne,
 non potius vitae finem facis atque laboris?
 nam tibi praeterea quod machiner inveniamque,
 quod placeat, nil est: eadem sunt omnia semper. 945
 si tibi non annis corpus iam marcet et artus
 confecti languent, eadem tamen omnia restant,
 omnia si pergas vivendo vincere saecula,
 atque etiam potius, si numquam sis moriturus,
 quid respondemus, nisi iustam intendere litem 950
 naturam et veram verbis exponere causam?
 955 grandior hic vero si iam seniorque queratur
 952 atque obitum lamentetur miser amplius aequo,

in person could rally any of us in such words as these, 'what hast thou, o mortal, so much at heart, that thou goest such lengths in sickly sorrows? why bemoan and bewail death? for if thy life past and gone has been welcome to thee and thy blessings have not all, as if they were poured into a perforated vessel, run through and been lost without avail; why not take thy departure like a guest filled with life, and with resignation, thou fool, enter upon untroubled rest? but if all that thou hast enjoyed, has been squandered and lost and life is a grievance, why seek to make any addition, to be wasted perversely in its turn and lost utterly without avail? why not rather make an end of life and travail? for there is nothing more which I can contrive and discover for thee to give pleasure: all things are ever the same. Though thy body is not yet decayed with years nor thy frame worn out and exhausted, yet all things remain the same, ay and would remain, though in length of life thou shouldst out-last all races of things now living, nay even more if thou shouldst never die,' what answer do we make save this, that nature sets up against us a well-founded claim and puts forth in her pleading a true indictment? If however one of greater age and more advanced in years should complain and lament poor wretch his death more than is right,

non merito inclamet magis et voce increpet acri?

954 'aufer abhinc lacrimas, balatro, et compesce querellas. 955
omnia perfunctus ^{tae}vitai praemia marces.
sed quia semper aves quod abest, praesentia temnis,
imperfecta tibi elapsast ingrataque vita
et nec opinanti mors ad caput adstitit ante
quam satur ac plenus possis discedere rerum. 960
nunc aliena tua tamen aetate omnia mitte
aequo animoque agedum gnatis concede: necessest.
iure, ut opinor, agat, iure increpet inciletque;
cedit enim rerum novitate extrusa vetustas
semper, et ex aliis aliud reparare necessest; 965
nec quisquam in barathrum nec Tartara deditur atra:
materies opus est ut crescant postera saecula;
quae tamen omnia te vita perfuncta sequentur;
nec minus ergo ante haec quam tu cecidere, cadentque.
sic alid ex alio numquam desistet oriri 970
vitaque mancipio nulli datur, omnibus usu.
respice item quam nil ad nos anteacta vetustas
temporis aeterni fuerit, quam nascimur ante.
hoc igitur speculum nobis natura futuri
temporis exponit post mortem denique nostram. 975

would she not with greater cause raise her voice and rally him in sharp accents, 'away from this time forth with your tears, rascal; a truce to your complainings: thou decayest after full enjoyment of all the prizes of life. But because thou ever yearnest for what is not present, and despisest what is, life has slipped from thy grasp unfinished and unsatisfying, and or ever thou thoughtest, death has taken his stand at thy pillow, before thou canst take thy departure sated and filled with good things. Now however give up all things unsuited to thy age, and come give place to thy children; for it must be so.' With good reason methinks she would bring her charge, with reason rally and reproach; for old things give way and are supplanted by new without fail, and one thing must ever be replenished out of other things; and no one is delivered over to the pit and black Tartarus: matter is needed for after generations to grow; all of which though will follow thee when they have finished their term of life; and it follows that all these no less than thou have before this come to an end and hereafter will come to an end. Thus one thing never ceases to rise out of another, and life is granted to none in fee-simple, to all in usufruct. Think too how the bygone antiquity of everlasting time before our birth was nothing to us. Nature therefore holds this up to us as a mirror of the time yet to come after our death. Is

numquid ibi horribile apparet, num triste videtur
quicquam, non omni somno securius exstat?

Atque ea nimirum quaecumque Acherunte profundo
proditæ sunt esse, in vita sunt omnia nobis.

nec miser inpendens magnum timet aere saxum 980

Tantalus, ut famast, cassa formidine torpens;

sed magis in vita divom metus urget inanis

mortalis casumque timent quem cuique ferat fors.

nec Tityon volucres ineunt Acherunte iacentem

nec quod sub magno scrutentur pectore quicquam 985

perpetuam aetatem possunt reperire profecto.

(quamlibet immani proiectu corporis exstet,)

qui non sola novem dispessis iugera membris

optineat, sed qui terrai totius orbem,

non tamen aeternum poterit perferre dolorem 990

nec praeberè cibum proprio de corpore semper.

sed Tityos nobis hic est, in amore iacentem

quem volucres lacerant atque exest anxius angor

aut alia quavis scindunt cuppèdine curae.

Sisyphus in vita quoque nobis ante oculos est 995

(qui petere a populo fascès saevasque secures

imbibit) et semper victus tristisque recedit.

nam petere imperium quod inanest nec datur umquam,

atque in eo semper durum sufferre laborem,

there aught in this that looks appalling, aught that wears an aspect of
gloom? is it not more untroubled than any sleep?

And those things sure enough, which are fabled to be in the deep of
Acheron, do all exist for us in this life. No Tantalus, numbed by
groundless terror, as the story is, fears poor wretch a huge stone hanging
in air; but in life rather a baseless dread of the gods vexes mortals: the
fall they fear is such fall of luck as chance brings to each. Nor do birds eat
a way into Tityos laid in Acheron, nor can they sooth to say find during
eternity food to peck under his large breast. However huge the bulk
of body he extends, though such as to take up with outspread limbs not
nine acres merely, but the whole earth, yet will he not be able to endure
everlasting pain and supply food from his own body for ever. But he is
for us a Tityos, whom as he grovels in love vultures rend and bitter
bitter anguish eats up or troubled thoughts from any other passion do
rive. In life too we have a Sisyphus before our eyes who is bent on
asking from the people the rods and cruel axes, and always retires
defeated and disappointed. For to ask for power, which empty as it is
is never given, and always to undergo in the pursuit severe toil, this is

hoc est adverso nixantem trudere monte 1000
 saxum quod tamen e summo iam vertice rusum
 volvitur et plani raptim petit aequora campi.
 deinde animi ingratham naturam pascere semper
 atque explere bonis rebus satiareque numquam,
 quod faciunt nobis annorum tempora, circum 1005
 cum redeunt fetusque ferunt variosque lepores,
 nec tamen explemur vitai fructibus umquam,
 hoc, ut opinor, id est, aevo florente puellas
 quod memorant laticem pertusum congerere in vas,
 quod tamen expleri nulla ratione potestur. 1010
 Cerberus et furiae iam vero et lucis egestas

*

Tartarus horriferos eructans faucibus aestus,
 qui neque sunt usquam nec possunt esse profecto.
 sed metus in vita poenarum pro male factis
 est insignibus insignis, scelerisque luella, 1015
 carcer et horribilis de saxo iactu' deorsum,
 verbera carnifices robur pix lammina taedae;
 quae tamen etsi absunt, at mens sibi conscia factis
 praemetuens adhibet stimulos terretque flagellis
 nec videt interea qui terminus esse malorum 1020
 possit nec quae sit poenarum denique finis

forcing up-hill with much effort a stone which after all rolls back again from the summit and seeks in headlong haste the levels of the plain. Then to be ever feeding the thankless nature of the mind, and never to fill it full and sate it with good things, as the seasons of the year do for us, when they come round and bring their fruits and varied delights, though after all we are never filled with the enjoyments of life, this methinks is to do what is told of the maidens in the flower of their age, to keep pouring water into a perforated vessel which in spite of all can never be filled full. Moreover Cerberus and the furies and yon privation of light [are idle tales, as well as all the rest, Ixion's wheel and black] Tartarus belching forth hideous fires from his throat: things which nowhere are nor sooth to say can be. But there is in life a dread of punishment for evil deeds, signal as the deeds are signal, and as atonement of guilt, the prison and the frightful hurling down from the rock, scourgings executioners, the dungeon of the doomed, the pitch, the metal plate, torches; and even though these are wanting, yet the conscience-stricken mind through boding fears applies to itself goads and frightens itself with whips, and sees not meanwhile what end there can be of ills

atque eadem metuit magis haec ne in morte gravescant.
hic Acherusia fit stultorum denique vita.

Hoc etiam tibi tute interdum dicere possis
'lumina ^{Asia} sis oculis etiam bonus Ancu' reliquit — 1025
qui melior multis quam tu fuit, improbe, rebus.
inde alii multi reges rerumque potentes
occiderunt, magnis qui gentibus imperitarunt.
ille quoque ipse, viam qui quondam per mare magnum
stravit iterque dedit legionibus ire per altum 1030
ac pedibus salsas docuit superare lucunas
et contempsit (equis insultans) murmura ponti,
lumine adempto animam moribundo corpore fudit.
Scipiadas, belli fulmen, Carthaginis horror,
ossa dedit terrae proinde ac famul infimus esset. 1035+
adde repertoires doctrinarum atque leporum,
adde Heliconiadum comites; quorum unus Homerus
sceptra potitus eadem aliis sopitu' quietest.
denique Democritum postquam matura vetustas
admonuit memores motus languescere mentis, 1040
sponte sua leto caput obviis optulit ipse.
ipse Epicurus obit decurso lumine vitae,
qui genus humanum ingenio superavit et omnis

or what limit at last is to be set to punishments, and fears lest these very evils be aggravated after death. The life of fools at length becomes a hell here on earth.

This too you may sometimes say to yourself 'even worthy Ancus has quitted the light with his eyes, who was far far better than thou, unconscionable man. And since then many other kings and kesars have been laid low, who lorded it over mighty nations. He too, even he who erst paved a way over the great sea and made a path for his legions to march over the deep and taught them to pass on foot over the salt pools and set at naught the roarings of the sea, trampling on them with his horses, had the light taken from him and shed forth his soul from his dying body. The son of the Scipios, thunderbolt of war, terror of Carthage, yielded his bones to earth just as if he were the lowest menial. Think too of the inventors of all sciences and graceful arts, think of the companions of the Heliconian maids; among whom Homer bore the sceptre without a peer, and he now sleeps the same sleep as others. Then there is Democritus who, when a ripe old age had warned him that the memory-waking motions of his mind were waning, by his own spontaneous act offered up his head to death. Even Epicurus passed away, when his light of life had run its course, he who surpassed in intellect

restinçxit, stellas exortus ut aetherius sol.
 tu vero dubitabis et indignabere obire? 1045
 mortua cui vita est prope iam vivo atque videnti,
 qui somno partem maiorem conteris aevi
 et vigilans stertis nec somnia cernere cessas
 sollicitamque geris cassa formidine mentem
 nec reperire potes tibi quid sit saepe mali, cum 1050
 ebrius urgeris multis miser undique curis
 atque animi incerto fluitans errore vagaris.'

Si possent homines, proinde ac sentire videntur
 pondus inesse animo quod se gravitate fatiget,
 e quibus id fiat causis quoque noscere et unde 1055
 tanta mali tamquam moles in pectore constet,
 haut ita vitam agerent, ut nunc plerumque videmus
 quid sibi quisque velit nescire et quaerere semper
 commutare locum quasi onus deponere possit.
 exit saepe foras magnis ex aedibus ille, 1060
 esse domi quem pertaesumst, subitoque *revertit*,
 quippe foris nilo melius qui sentiat esse.
 currit agens mannos ad villam praecipitanter,
 auxilium tectis quasi ferre ardentibus instans;
 oscitat extemplo, tetigit cum limina villae, 1065

the race of man and quenched the light of all, as the ethereal sun arisen
 quenches the stars. Wilt thou then hesitate and think it a hardship to
 die? thou for whom life is well nigh dead whilst yet thou livest and
 seest the light, who wastest the greater part of thy time in sleep and
 snoorest wide awake and ceasest not to see visions and hast a mind
 troubled with groundless terror and canst not discover often what it is
 that ails thee, when besotted man thou art sore pressed on all sides with
 a multitude of cares and goest astray tumbling about in a maze of
 mental error.

If, just as they are seen to feel that a load is on their mind which
 wears them out with its pressure, men might apprehend from what
 causes too it is produced and whence such a pile, if I may say so, of ill
 lies on their breast, they would not spend their life as we see them now
 for the most part do, not knowing any one of them what he means and
 wanting ever change of place as though he might lay down his burden.
 The man who is sick of home often issues forth from his large mansion, and
 as suddenly comes back to it, finding as he does that he is no better off
 abroad. He races to his country-house, driving his jennets in headlong
 haste, as if hurrying to bring help to a house on fire: he yawns the
 moment he has reached the door of his house, or sinks heavily into

aut abit in somnum gravis atque oblivia quaerit,
aut etiam properans urbem petit atque revisit.

hoc se quisque modo fugit (at quem scilicet, ut fit,
effugere haut potis est, ingratis haeret) et odit
propterea, morbi quia causam non tenet aeger; 1070
quam bene si videat, iam rebus quisque relictis
naturam primum studeat cognoscere rerum,
temporis aeterni quoniam, non unius horae,
ambigitur status, in quo sit mortalibus omnis
aetas, post mortem quae restat cumque manenda. 1075

Denique tanto opere in dubiis trepidare periclis
(quae mala nos subigit vitae tanta cupido?)
certa quidem finis vitae mortalibus adstat
nec devitari letum pote quin obeamus.
praeterea versamur ibidem atque insumus usque 1080
nec nova vivendo procuditur ulla voluptas;
sed dum abest quod avemus, id exsuperare videtur
cetera; post aliut, cum contigit illud, avemus
et sitis aequa tenet vitae semper hiantis.
posteraque in dubiis fortunam quam vehat aetas, 1085
quidve ferat nobis casus quive exitus instet.
nec prorsum vitam ducendo demimus hilum

sleep and seeks forgetfulness, or even in haste goes back again to town. In this way each man flies from himself (but self, from whom, as you may be sure is commonly the case, he cannot escape, clings to him in his own despite) and hates himself, because he is sick and knows not the cause of the malady; for if he could rightly see into this, relinquishing all else each man would study to learn the nature of things, since the point at stake is the condition for eternity, not for one hour, in which mortals have to pass all the time which remains for them to expect after death.

Once more what evil lust of life is this which constrains us with such force to be so mightily troubled in doubts and dangers? a sure term of life is fixed for mortals, and death cannot be shunned, but meet it we must. Moreover we are ever engaged, ever involved in the same pursuits, and no new pleasure is struck out by living on; but whilst what we crave is wanting, it seems to transcend all the rest; then, when it has been gotten, we crave something else, and ever does the same thirst of life possess us, as we gape for it open-mouthed. Quite doubtful it is what fortune the future will carry with it or what chance will bring us or what end is at hand. Nor by prolonging life do we take one tittle

tempore de mortis nec delibare valemus,
quo minus esse diu possimus forte perempti.
proinde licet quot vis vivendo condere saecula; 1090
mors aeterna tamen nilo minus illa manebit,
nec minus ille diu iam non erit, ex hodierno
lumine qui finem vitae fecit, et ille,
mensibus atque annis qui multis occidit ante.

from the time past in death nor can we fret anything away, whereby we may haply be a less long time in the condition of the dead. Therefore you may complete as many generations as you please during your life; none the less however will that everlasting death await you; and for no less long a time will he be no more in being, who beginning with today has ended his life, than the man who has died many months and years ago.

T. LUCRETI CARI
DE RERUM NATURA

LIBER QUARTUS

[Avia Pieridum peragro loca nullius ante
trita solo. iuvat integros accedere fontis
atque haurire, iuvatque novos decerpere flores
insignemque meo capiti petere inde coronam
unde prius nulli velarint tempora musae; 5
primum quod magnis doceo de rebus et artis
religionum animum nodis exsolvere pergo,
deinde quod obscura de re tam lucida pango
carmina, musaeo contingens cuncta lepore.
id quoque enim non ab nulla ratione videtur; 10
nam veluti pueris absinthia taetra medentes
cum dare conantur, prius oras pocula circum
contingunt mellis dulci flavoque liquore,
ut puerorum aetas improvida ludificetur
labrorum tenus, interea perpotet amarum 15
absinthei laticem deceptaque non capiatur,

I traverse the pathless haunts of the Pierides never yet trodden by sole of man. I love to approach the untasted springs and to quaff, I love to cull fresh flowers and gather for my head a distinguished crown from spots whence the muses have yet veiled the brows of none; first because I teach of great things and essay to release the mind from the fast bonds of religious scruples, and next because on a dark subject I pen such lucid verses o'erlaying all with the muses' charm. For that too would seem to be not without good grounds: even as physicians when they purpose to give nauseous wormwood to children, first smear the rim round the bowl with the sweet yellow juice of honey, that the unthinking age of children may be fooled as far as the lips, and meanwhile drink up the bitter draught of wormwood and though beguiled

sed potius tali pacto recreata valescat,
 sic ego nunc, quoniam haec ratio plerumque videtur
 tristior esse quibus non est tractata, retroque
 volgus abhorret ab hac, volui tibi suaviloquenti 20
 carmine Pierio rationem exponere nostram
 et quasi musaeo dulci contingere melle,
 si tibi forte animum tali ratione tenere
 versibus in nostris possem, dum percipis omnem
 naturam rerum ac persentis utilitatem.] 25

Atque animi quoniam docui natura quid esset
 et quibus e rebus cum corpore compta vigeret
 quove modo distracta rediret in ordia prima,
 nunc agere incipiam tibi, quod vehementer ad has res
 attinet, esse ea quae rerum simulacra vocamus: 30
 quae, quasi membranae summo de corpore rerum
 dereptae, volitant ultroque citroque per auras,
 atque eadem nobis vigilantibus obvia mentes
 terrificant atque in somnis, cum saepe figuras
 contuimur miras simulacraque luce carentum, 35
 quae nos horrifice languentis saepe sopore
 excierunt: ne forte animas Acherunte reamur
 effugere aut umbras inter vivos volitare

yet not be betrayed, but rather by such means recover health and strength: so I now, since this doctrine seems generally somewhat bitter to those by whom it has not been handled, and the multitude shrinks back from it in dismay, have resolved to set forth to you our doctrine in sweet-toned Pierian verse and o'erlay it as it were with the pleasant honey of the muses, if haply by such means I might engage your mind on my verses, till such time as you apprehend all the nature of things and thoroughly feel what use it has.

And now that I have taught what the nature of the mind is and out of what things it is formed into one being with the body, and how it is dissevered and returns into its first-beginnings, I will attempt to lay before you a point which most nearly concerns these questions, the existence of things which we call idols of things: these, like films peeled off from the surface of things, fly to and fro through the air, and do likewise frighten our minds when they present themselves to us awake as well as in sleep, what time we behold strange shapes and idols of the light-bereaved, which have often startled us in appalling wise as we lay relaxed in sleep: this I will attempt, that we may not haply believe that souls break loose from Acheron or that shades fly about among the living or

neve aliquid nostri post mortem posse relinqui,
 cum corpus simul atque animi natura perempta 40
 in sua discessum dederint primordia quaeque.

Dico igitur rerum effigias tenuisque figuras
 mittier ab rebus summo de corpore rerum,

51 quae quasi membranae vel cortex nomenclitandast, 50
 quod speciem ac formam similem gerit eius imago
 cuiuscumque cluet de corpore fusa vagari.

44 id licet hinc quamvis hebeti cognoscere corde.

54 principio quoniam mittunt in rebus apertis
 corpora res multae, partim diffusa solute, 55
 robora ceu fumum mittunt ignesque vaporem,
 et partim contexta magis condensaque, ut olim
 cum teretis ponunt tunicas aestate cicadae,
 et vituli cum membranas de corpore summo
 nascentes mittunt, et item cum lubrica serpens 60
 exuit in spinis vestem; nam saepe videmus
 illorum spoliis vepres volitantibus auctas:

quae quoniam fiunt, tenuis quoque debet imago
 ab rebus mitti summo de corpore rerum.

nam cur illa cadant magis ab rebusque recedant 65
 quam quae tenvia sunt, hiscendist nulla potestas;
 praesertim cum sint in summis corpora rebus

that any part of us is left behind after death, when the body and the nature of the mind destroyed together have taken their departure into their several first-beginnings.

I say then that pictures of things and thin shapes are emitted from things off their surface: these are like films or may each be named a rind, because each image bears an appearance and form like to the thing whatever it is from whose body it is shed and wanders forth. This you may learn however dull of apprehension from what follows. First of all since among things open to sight many emit bodies, some in a state of loose diffusion, like smoke which logs of oak, heat which fires emit; some of a closer and denser texture, like the gossamer coats which at times cicades doff in summer, and the films which calves at their birth cast from the surface of their body, as well as the vesture which the slippery serpent puts off among the thorns; for often we see the brambles enriched with their flying spoils: since these cases occur, a thin image likewise must be emitted from things off their surface. For why those films should drop off and withdraw from things rather than films which are really thin, no reason whatever can be assigned; especially since there are on the surface of things many minute bodies which may

multa minuta, iaci quae possint ordine eodem
 quo fuerint et formai servare figuram,
 et multo citius, quanto minus indupediri 70
 pauca queunt et sunt in prima fronte locata.
 nam certe iacere ac largiri multa videmus,
 non solum ex alto penitusque, ut diximus ante,
 verum de summis ipsum quoque saepe colorem.
 et volgo faciunt id lutea russaque vela 75
 et ferrugina, cum magnis intenta theatri
 per malos volgata trabesque trementia flutant;
 namque ibi consessum caveai supter et omnem
 scaenai speciem, patrum coetumque decorum
 inficiunt coguntque suo fluitare colore. 80
 et quanto circum mage sunt inclusa theatri
 moenibu', tam magis haec intus perfusa lepore
 omnia conrident correpta luce diei.
 ergo lintea de summo cum corpore fucum
 mittunt, effigias quoque debent mittere tenvis 85
 res quaeque, ex summo quoniam iaculantur utraque.
 sunt igitur iam formarum vestigia certa
 quae volgo volitant suptili praedita filo
 nec singillatim possunt secreta videri.
 praeterea omnis odor fumus vapor atque aliae res 90

be discharged in the same order they had before and preserve the outline of the shape, and be discharged with far more velocity, inasmuch as they are less liable to get hampered being few in number and stationed in the front rank. For without doubt we see many things discharge and freely give not only from the core and centre, but from their surfaces, besides other things colour itself. And this is commonly done by yellow and red and dark-blue awnings, when they are spread over large theatres and flutter and wave as they stretch across their poles; for then they dye the seated assemblage below and all the show of the stage and the richly attired company of the fathers, and compel them to dance about in their colour. And the more these objects are shut in all round by the walls of the theatre, the more do all of them within laugh on all hands, o'erlaid with graceful hues, the light of day being narrowed. Therefore since sheets of canvas emit colour from their surface, all things will naturally emit thin pictures too, since in each case alike they discharge from the surface. There are therefore as now shewn sure outlines of shapes, which fly all about possessed of an exquisitely small thickness and cannot when separate be seen one at a time. Again all smell smoke heat and other

consimiles ideo diffusae e rebus abundant,
 ex alto quia dum veniunt intrinsecus ortae,
 scinduntur per iter flexum, nec recta viarum
 ostia sunt qua contendant exire coortae.
 at contra tenuis summi membrana coloris 95
 cum iacitur, nil est quod eam discerpere possit,
 in promptu quoniam est in prima fronte locata.
 postremo speculis in aqua splendoreque in omni
 quaecumque apparent nobis simulacra, necessest,
 quandoquidem simili specie sunt praedita rerum 100
extima, imaginibus missis consistere rerum.
 sunt igitur tenues formae rerum similesque 104
 effigiae, singillatim quas cernere nemo
 cum possit tamen, adsiduo crebroque repulsu
 reiectae reddunt speculorum ex aequore visum,
 nec ratione alia servari posse videntur,
 tanto opere ut similes reddantur cuique figurae.
 Nunc age quam tenui natura constet imago 110
 percipe. et in primis, quoniam primordia tantum
 sunt infra nostros sensus tantoque minora
 quam quae primum oculi coeptant non posse tueri,
 nunc tamen id quoque uti confirmem, exordia rerum

such-like things stream off things in a state of diffusion, because while they are coming from the depths of the body having arisen within it, they are torn in their winding passage, and there are no straight orifices to the paths, for them to make their way out by in a mass. But on the other hand when a thin film of surface colour is discharged, there is nothing to rend it, since it is ready to hand stationed in front rank. Lastly in the case of all idols which show themselves to us in mirrors water or any other shining object, since their outsides are possessed of an appearance like to the things they represent, they must be formed of emitted images of things. There are therefore thin shapes and pictures like to the things which, though no one can see them one at a time, yet when thrown off by constant and repeated reflexion give back a visible image from the plane surface of mirrors; and in no other way it would seem can they be kept so entire that shapes are given back so exceedingly like each object.

Now mark, and learn how thin the nature of an image is. And first of all, since the first-beginnings are so far below the ken of our senses and much smaller than the things which our eyes begin to be unable to see, to strengthen yet more the proof of this also, learn in a few

cunctarum quam sint suptilia percipe paucis. 115
 primum animalia sunt iam partim tantula, quorum
 tertia pars nulla possit ratione videri.
 horum intestinum quodvis quale esse putandumst!
 quid cordis globus aut oculi? quid membra? quid artus?
 quantula sunt! quid praeterea primordia quaeque 120
 unde anima atque animi constet natura necessumst?
 nonne vides quam sint subtilia quamque minuta?
 praeterea quaecumque suo de corpore odorem
 expirant acrem, panaces absinthia taetra
 habrotonique graves et tristia centaurea, 125
 quorum unum quidvis leviter si forte duobus

*

quin potius noscas rerum simulacra vagari
 multa modis multis nulla vi cassaque sensu?
 [Sed ne forte putes ea demum sola vagari,
 quaecumque ab rebus rerum simulacra recedunt, 130
 sunt etiam quae sponte sua gignuntur et ipsa
 constituuntur in hoc caelo qui dicitur aer,
 135 quae multis formata modis sublime feruntur
 141 nec speciem mutare suam liquentia cessant
 et cuiusque modi formarum vertere in oras; 135]

words how minutely fine are the beginnings of all things. First, living things are in some cases so very little, that their third part cannot be seen at all. Of what size are we to suppose any gut of such creatures to be? or the ball of the heart or the eyes? the limbs? or any part of the frame? how small they must be! And then further the several first-beginnings of which their soul and the nature of their mind must be formed? do you not perceive how fine, how minute they are? Again in the case of all things which exhale from their body a pungent smell, all-heal, nauseous wormwood, strong-scented southernwood and the bitter centauries, any one of which, if you happen to [feel it] lightly between two [fingers, will impregnate them with a strong smell]** but rather you are to know that idols of things wander about many in number in many ways, of no force, powerless to excite sense.

But lest haply you suppose that only those idols of things which go off from things and no others wander about, there are likewise those which are spontaneously begotten and are formed by themselves in this lower heaven which is called air: these fashioned in many ways are borne along on high and being in a fluid state cease not to alter their appearance and change it into the outline of shapes of every possible

- 133 ut nubes facile interdum concreescere in alto
cernimus et mundi speciem violare serenam
- 136 aera mulcentes motu. nam saepe Gigantum
ora volare videntur et umbram ducere late,
interdum magni montes avolsaque saxa 140
montibus anteire et solem succedere praeter,
140 inde alios trahere atque inducere belua nimbos.]
- 143 Nunc ea quam facili et celeri ratione genantur
perpetuoque fluant ab rebus lapsaque cedant
.
semper enim summum quicquid de rebus abundat 145
quod iaculentur. et hoc alias cum pervenit in res,
transit, ut in primis vitrum. sed ubi aspera saxa
aut in materiam ligni pervenit, ibi iam
scinditur ut nullum simulacrum reddere possit.
at cum splendida quae constant opposta fuerunt 150
densaque, ut in primis speculum est, nil accidit horum;
nam neque, uti vitrum, potis est transire, neque autem
scindi; quam meminit levor praestare salutem.
quapropter fit ut hinc nobis simulacra redundant.
et quamvis subito quovis in tempore quamque 155
rem contra speculum ponas, apparet imago;

kind; as we see clouds sometimes gather into masses on high and blot the calm clear face of heaven, fanning the air with their motion. Thus often the faces of giants are seen to fly along and draw after them a far-spreading shadow; sometimes great mountains and rocks torn from the mountains are seen to go in advance and pass across the sun; and then some huge beast is observed to draw with it and bring on other storm-clouds.

Now [I will proceed to shew] with what ease and celerity they are begotten and how incessantly they flow and fall away from things. The outermost surface is ever streaming off from things and admits of being discharged: when this reaches some things, it passes through them, glass especially. But when it reaches rough stones or the matter of wood, it is then so torn that it cannot give back any idol. But when objects at once shining and dense have been put in its way, a mirror especially, none of these results has place: it can neither pass through it, like glass, nor can it be torn either; such perfect safety the polished surface minds to ensure. In consequence of this idols stream back to us from such objects; and however suddenly at any moment you place any thing opposite a mirror, an image shews itself: hence you may be sure that thin tex-

perpetuo fluere ut noscas è corpore summo
 texturas rerum tenuis tenuisque figuras.
 ergo multa brevi spatio simulacra genuntur,
 ut merito celer his rebus dicatur origo. 160
 et quasi multa brevi spatio summittere debet
 lumina sol ut perpetuo sint omnia plena,
 sic ab rebus item simili ratione necessest
 temporis in puncto rerum simulacra ferantur
 multa modis multis in cunctas undique partis; 165
 quandoquidem speculum quocumque obvertimus oris,
 res ibi respondent simili forma atque colore.

Praeterea modo cum fuerit liquidissima caeli
 tempestas, perquam subito fit turbida foede,
 undique uti tenebras omnis Acherunta rearis 170
 liquisse et magnas caeli complexesse cavernas.
 usque adeo taetra nimborum nocte coorta
 inpendent atrae formidinis ora superne;
 quorum quantula pars sit imago dicere nemost
 qui possit neque eam rationem reddere dictis. 175

Nunc age, quam celeri motu simulacra ferantur
 et quae mobilitas ollis tranantibus auras
 reddita sit, longo spatio ut brevis hora teratur,
 in quem quaeque locum diverso numine tendunt,

tures and thin shapes of things incessantly stream from their surface. Therefore many idols are begotten in a short time, so that the birth of such things is with good reason named a rapid one. And as the sun must send forth many rays of light in a short time in order that all things may be continually filled with it, so also for a like reason there must be carried away from things in a moment of time idols of things many in number in many ways in all directions round; since to whatever part of them we present a mirror before their surfaces, other things correspond to these in the mirror of a like shape and like colour.

Moreover though the state of heaven has just before been of unsullied purity, with exceeding suddenness it becomes so hideously overcast, that you might imagine all its darkness had abandoned Acheron throughout and filled up the great vaults of heaven: in such numbers, mid the frightful night of storm-clouds that has gathered, do faces of black horror hang over us on high. Now there is no one who can tell how small a fraction of these an image is, or express that sum in language.

Now mark: how swift the motion is with which idols are borne along, and what velocity is assigned to them as they scour through the air, so that but a short hour is spent on a journey through long space,

	suavidicis potius quam multis versibus edam;	180
	parvus ut est cycni melior canor, ille gruum quam clamor in aetheriis dispersus nubibus austri.	
	principio persaepe levis res atque minutis corporibus factas celeris licet esse videre.	
	in quo iam genere est solis lux et vapor eius	185
	propterea quia sunt e primis facta minutis quae quasi cuduntur perque aeris intervallum non dubitant transire sequenti concita plaga. suppeditatur enim confestim lumine lumen et quasi protelo stimulator fulgere fulgur.	190
	quapropter simulacra pari ratione necesse est inmemorable per spatium transcurrere posse temporis in puncto, primum quod parvola causa est procul a tergo quae provehat atque propellat,	
196	deinde quod usque adeo textura praedita rara	195
	mittuntur, facile ut quasvis penetrare queant res et quasi permanare per aeris intervallum. praeterea si, quae penitus corpuscula rerum	
200	ex altoque foras mittuntur, solis uti lux ac vapor, haec puncto cernuntur lapsa diei	200
	per totum caeli spatium diffundere sese	

whatever the spot towards which they go with a movement of varied tendency, all this I will tell in sweetly worded rather than in many verses; as the short song of the swan is better than the loud noise of cranes scattered abroad amid the ethereal clouds of the south. First of all we may very often observe that things which are light and made of minute bodies are swift. Of this kind are the light of the sun and its heat, because they are made of minute first things which are knocked forward so to speak and do not hesitate to pass through the space of air between, ever driven on by a blow following behind; for light on the instant is replaced by light and brightness goaded to shew its brightness in what you might call an ever on-moving team. Therefore in like manner idols must be able to scour in a moment of time through space unspeakable, first because they are exceeding small and there is a cause at their back to carry and impel them forward; next because when emitted they are possessed of so rare a texture, that they can readily pass through any things and stream as it were through the space of air between. Again if those minute bodies of things which are given out from the inmost depths of these things, as the light and heat of the sun, are seen in a moment of time to glide and spread themselves through the

perque volare mare ac terras caelumque rigare,
 quid quae sunt igitur iam prima fronte parata,
 205 cum iaciuntur et emissum res nulla moratur,
 195 quod superest, ubi tam volucris levitate ferantur? 205
 206 quone vides citius debere et longius ire
 multiplexque loci spatium transcurrere eodem
 tempore quo solis pervolgant lumina caelum?
 hoc etiam in primis specimen verum esse videtur
 quam celeri motu rerum simulacra ferantur, 210
 quod simul ac primum sub diu splendor aquai
 ponitur, extemplo caelo stellante serena
 sidera respondent in aqua radiantia mundi.
 iamne vides igitur quam puncto tempore imago
 aetheris ex oris in terrarum accidat oras? 215
 quare etiam atque etiam mira fateare necessest

 corpora quae feriant oculos visumque lacescant.
 perpetuoque fluunt certis ab rebus odores;
 frigus ut a fluviis, calor ab sole, aestus ab undis
 aequoris exesor moerorum litora circum. 220
 nec variae cessant voces volitare per auras.
 denique in os salsi venit umor saepe saporis,

length and breadth of heaven, fly over sea and lands and flood the heaven, what then of those which stand ready posted in front rank, when they are discharged and nothing obstructs their egress, where moreover they are borne on with such winged rapidity? do you not see how much faster and farther they must travel, scouring through many times the same amount of space in the same time that the sunlight takes to spread over heaven? This too appears to be an eminently true proof of the velocity with which idols of things are borne along: as soon as ever the brightness of water is set down in the open air, if the heaven is starry, in a moment the clear radiant constellations of ether imaged in the water correspond to those in the heaven. Now do you see in what a moment of time an image drops down from the borders of heaven to the borders of earth? Therefore again and again I repeat you must admit that bodies capable of striking the eyes and of provoking sense [constantly travel] with a marvellous [velocity]. Smells too incessantly stream from certain things; as does cold from rivers, heat from the sun, spray from the waves of the sea, that eater into walls near the shore. Various sounds also cease not to fly through the air. Then too a moist salt flavour often comes into the mouth, when we are moving about beside

cum mare versamur propter, dilutaque contra
 cum tuimur misceri absinthia, tangit amaror.
 usque adeo omnibus ab rebus res quaeque fluenter 225
 fertur et in cunctas dimittitur undique partis
 nec mora nec requies interdatur ulla fluendi,
 perpetuo quoniam sentimus, et omnia semper
 cernere odorari licet et sentire sonare.

Praeterea quoniam manibus tractata figura 230
 in tenebris quaedam cognoscitur esse eadem quae
 cernitur in luce et claro candore, necessest
 consimili causa tactum visumque moveri.
 nunc igitur si quadratum temptamus et id nos
 commovet in tenebris, in luci quae poterit res 235
 accidere ad speciem quadrata, nisi eius imago?
 esse in imaginibus quapropter causa videtur
 cernundi neque posse sine his res ulla videri.
 nunc ea quae dico rerum simulacra feruntur
 undique et in cunctas iaciuntur didita partis; 240
 verum nos oculis quia solis cernere quimus,
 propterea fit uti, speciem quo vertimus, omnes
 res ibi eam contra feriant forma atque colore.
 et quantum quaeque ab nobis res absit, imago
 efficit ut videamus et internoscere curat; 245

the sea ; and when we look on at the mixing of a decoction of worm-wood, its bitterness affects us. In such a constant stream from all these things the several qualities are carried and are transmitted in all directions round, and no delay, no respite in the flow is ever granted, since we constantly have feeling, and may at any time see smell and hear the sound of anything.

Again since a particular figure felt by the hands in the dark is known to be the same which is seen in the bright light of day, touch and sight must be excited by a quite similar cause. Well then if we handle a square thing and it excites our attention in the dark, in the day-light what square thing will be able to fall on our sight, except the image of that thing ? Therefore the cause of seeing it is plain lies in images and no thing can be perceived without them. Well the idols of things I speak of are borne along all round and are discharged and transmitted in all directions ; but because we can see with the eyes alone, the consequence is that, to whatever point we turn our sight, there all the several things meet and strike it with their shape and colour. And the image gives the power to see and the means to distinguish how far each thing is

nam cum mittitur, extemplo protrudit agitque
 aera qui inter se cumque est oculosque locatus,
 isque ita per nostras acies perlabitur omnis
 et quasi perterget pupillas atque ita transit.
 251 propterea fit uti videamus quam procul absit 250
 250 res quaeque. et quanto plus aeris ante agitatur
 et nostros oculos perterget longior aura,
 tam procul esse magis res quaeque remota videtur.
 scilicet haec summe celeri ratione geruntur,
 quale sit ut videamus et una quam procul absit. 255
 illud in his rebus minime mirabile habendumst,
 cur, ea quae feriant oculos simulacra videri
 singula cum nequeant, res ipsae perspiciantur.
 ventus enim quoque paulatim cum verberat et cum
 261 acre fluit frigus, non privam quamque solemus 260
 260 particulam venti sentire et frigoris eius,
 sed magis unorsum, fierique perinde videmus
 corpore tum plagas in nostro tamquam aliquae res
 verberet atque sui det sensum corporis extra.
 praeterea lapidem digito cum tundimus, ipsum 265
 tangimus extremum saxi summumque colorem,
 nec sentimus eum tactu, verum magis ipsam
 duritiem penitus saxi sentimus in alto.

distant from us ; for as soon as ever it is discharged, it pushes before it
 and impels all the air which lies between it and the eyes ; and thus it
 all streams through our eyes and brushes so to say the pupils and so
 passes through. The consequence is that we see how far distant each
 thing is. And the greater the quantity of air which is driven on before
 it and the larger the current which brushes our eyes, the more distant
 each different thing is seen to be. You must know these processes go
 on with extreme rapidity, so that at one and the same moment we see
 what like a thing is and how far distant it is. And this must by no
 means be deemed strange herein that, while the idols which strike the
 eyes cannot be seen one at a time, the things themselves are seen. For
 thus when the wind too beats us with successive strokes and when
 piercing cold streams, we are not wont to feel each single particle of
 that wind and cold, but rather the whole result ; and then we perceive
 blows take effect on our body just as if something or other were beating
 it and giving us a sensation of its body outside. Again when we thump
 a stone with a finger, we touch merely the outermost colour on the
 surface of the stone, and yet we do not feel that colour by our touch, but
 rather we feel the very hardness of the stone seated in its inmost depths.

Nunc age, cur ultra speculum videatur imago
 percipe; nam certe penitus semota videtur. 270
 quod genus illa foris quae vere transpiciuntur,
 ianua cum per se transpectum praebet apertum,
 multa facitque foris ex aedibus ut videantur.
 is quoque enim duplici geminoque fit aere visus.
 primus enim citra postes tum cernitur aer, 275
 inde fores ipsae dextra laevaue secuntur,
 post extraria lux oculos perterget et aer
 alter et illa foris quae vere transpiciuntur.
 sic ubi se primum speculi proiecit imago,
 dum venit ad nostras acies, protrudit agitque 280
 aera qui inter se cumquest oculosque locatus,
 et facit ut prius hunc omnem sentire queamus
 quam speculum. sed ubi speculum quoque sensimus ipsum,
 continuo a nobis in *idem* quae fertur imago
 pervenit et nostros oculos reiecta revisit 285
 atque alium prae se propellens aera volvit
 et facit ut prius hunc quam se videamus, eoque
 distare ab speculo tantum semota videtur.
 quare etiam atque etiam minime mirarier est par,
 illic quor reddant speculorum ex aequore visum, 290
 aeribus binis quoniam res confit utraque.

Now mark, and learn why the image is seen beyond the mirror; for without doubt it is seen withdrawn far within. The case is just the same as with things which are viewed in their reality beyond a door, when it offers through it an unobstructed prospect and lets many things outside be seen from a house. That vision too is effected by two separate airs: first there is an air seen in such a case inside the doorway; next come the leaves of the door right and left; next a light outside brushes the eyes, then a second air, then those things outside which are viewed in their reality. Thus when the image of the mirror has first discharged itself, in coming to our sight it pushes forward and impels all the air which lies between it and the eyes, and enables us to see the whole of it before the mirror. But when we have perceived the mirror as well, at once the image which is conveyed from us reaches the mirror and then is reflected and comes back to our eyes, and drives on and rolls in front of it a second air and lets us see this before itself, and for this reason it looks so far withdrawn from the mirror. Wherefore again and again I repeat there is no cause at all to wonder why the images give back the reflexion from the surface of mirrors in the spot they do, since in both the given cases the result is produced by two airs.

- nunc ea quae nobis membrorum dextera pars est,
in speculis fit ut in laeva videatur eo quod
planitiem ad speculi veniens cum offendit imago,
non convertitur incolumis, sed recta retrorsum 295
sic eliditur, ut siquis, prius arida quam sit
cretea persona, adlidat pilaeve trabive,
atque ea continuo rectam si fronte figuram
323 servet et elisam retro sese exprimat ipsa.
fiet ita, ante oculus fuerit qui dexter, ut idem 300
325 nunc sit laevus, et e laevo sit mutua dexter.
fit quoque de speculo in speculum ut tradatur imago,
quinque etiam sexvæ ut fieri simulacra suerint.
nam quaecumque retro parte interiore latebunt,
inde tamen, quamvis torte penitusque remota, 305
330 omnia per flexos aditus educta licebit
pluribus haec speculis videantur in aedibus esse.
usque adeo speculo in speculum translucet imago,
et cum laeva data est, fit rusum ut dextera fiat,
inde retro rursum redit et convertitur eodem. 310
335 quin etiam quaecumque latuscula sunt speculorum
adsimili lateris flexura praedita nostri,
dextera ea propter nobis simulacra remittunt,
aut quia de speculo in speculum transfertur imago,

To proceed, the right side of our body is seen in mirrors to be on the left, because when the image comes and strikes on the plane of the mirror, it is not turned back unaltered, but is beaten out in a right line backwards, just as if you were to take a plaster mask before it is dry and dash it on a pillar or beam, and it forthwith were to preserve the lines of its features undistorted in front and were to strike out an exact copy of itself straight backwards. The result will be that the eye which was right will now be left; and conversely the left become the right. An image may also be so transmitted from one mirror to another that five or six idols are often produced. And thus all the things which lurk in the inmost corners of a house, however far they are withdrawn into tortuous recesses, may yet be all brought out through winding passages by the aid of a number of mirrors and be seen to be in the house. So unfailingly does the mirror reflect itself from mirror to mirror; and when the left side is presented, it becomes the right in the new image; then it is changed back again and turns round to its former condition. Moreover all mirrors which form little sides possessing a curvature resembling our side, send back to us idols with their right corresponding to our right either because the image is transmitted from one mirror to

- inde ad nos elisa bis advolat, aut etiam quod 315
 340 circum agitur, cum venit, imago propterea quod
 flexa figura docet speculi convertier ad nos.
 indugredi porro pariter simulacra pedemque
 ponere nobiscum credas gestumque imitari
 propterea quia, de speculi qua parte recedas, 320
 345 continuo nequeunt illinc simulacra reverti;
 omnia quandoquidem cogit natura referri
 ac resilire ab rebus ad aequos reddita flexus.
- 299 Splendida porro oculi fugitant vitantque tueri.
 sol etiam caecat, contra si tendere pergas, 325
 propterea quia vis magnast ipsius et alte
 aera per purum graviter simulacra feruntur
 et feriunt oculos turbantia composituras.
 praeterea splendor quicumque est acer adurit
- 305 saepe oculos ideo quod semina possidet ignis 330
 multa, dolorem oculis quae gignunt insinuando.
 lurida praeterea fiunt quaecumque tuentur
 arquati, quia luroris de corpore eorum
 semina multa fluunt simulacris obvia rerum,
- 310 multaque sunt oculis in eorum denique mixta, 335
 quae contage sua palloribus omnia pingunt.

another, and then after it has been twice struck out flies to us, or it may be because the image, when it has come to the mirror, wheels round, because the curved shape of the mirror teaches it to turn itself as we are turned. Again you would think that idols step out and put down their foot at the same time with us and mimic our action, because from whatever part of a mirror you draw back, from that part forthwith no idols can be reflected ; since nature constrains all things, when they are carried back and recoil from things to be given back in postures like to those of the objects they represent.

Bright things again the eyes eschew and shun to look upon: the sun even blinds them, if you persist in turning them towards it, because its power is great and idols are borne through the clear air with great downward force from on high, and strike the eyes and disorder their fastenings. Moreover any vivid brightness often burns the eyes, because it contains many seeds of fire which make a way in and beget pain in the eyes. Again whatever the jaundiced look at, becomes a greenish-yellow, because many seeds of greenish-yellow stream from their body and meet the idols of things, and many too are mixed up in their eyes, and these by their infection tinge all things with sallow hues. Again we see out

e tenebris autem quae sunt in luce tuemur
 propterea quia, cum propior caliginis aer
 ater init oculos prior et possedit apertos,
 315 insequitur candens confestim lucidus aer 340
 qui quasi purgat eos ac nigras discutit umbras
 aeris illius; nam multis partibus hic est
 mobilior multisque minutior et mage pollens.
 qui simul atque vias oculorum luce replevit
 320 atque patefecit quas ante obsederat aer 345
 ater, continuo rerum simulacra secuntur
 quae sita sunt in luce, lacesuntque ut videamus.
 348 quod contra facere in tenebris e luce nequimus
 propterea quia posterior caliginis aer
 crassior insequitur qui cuncta foramina complet 350
 obsiditque vias oculorum, ne simulacra
 possint ullarum rerum coniecta movere.
 quadratasque procul turris cum cernimus urbis,
 propterea fit uti videantur saepe rutundae,
 angulus optusus quia longe cernitur omnis 355
 sive etiam potius non cernitur ac perit eius
 plaga nec ad nostras acies perlabitur ictus,
 aera per multum quia dum simulacra feruntur,
 cogit hebescere eum crebris offensibus aer.
 hoc ubi suffugit sensum simul angulus omnis, 360

of the dark things which are in the light for this reason: when the black air of darkness being the nearer has first entered and taken possession of the open eyes, the bright white air follows straightway after and cleanses them so to say and dispels the black shadows of the other air; for this is a great deal more nimble, a great deal more subtle and more efficacious. As soon as it has filled with light and opened up the passages of the eyes which the black air had before blocked up, forthwith the idols of things which are situated in the light follow and excite them so that we see. This we cannot do conversely in the dark out of the light because the grosser air of darkness follows behind and quite fills all the openings and blocks up the passages of the eyes, not letting the idols of any things at all be thrown into the eyes to move them. Again when we descry far off the square towers of a town they often appear to be round for this reason: all the angles are seen from a distance to look obtuse, or rather are not seen at all, and their blow is lost and their stroke never makes its way to our sight, because while the idols are borne on through much air, the air by repeated collisions blunts the stroke perforce. When in this way all the angles have together eluded the sense, the

fit quasi ut ad tornum saxorum structa terantur;
 non tamen ut coram quae sunt vereque rutunda,
 sed quasi adumbratim paulum simulata videntur.
 umbra videtur item nobis in sole moveri
 et vestigia nostra sequi gestumque imitari; 365
 aera si credis privatum lumine posse
 indugredi, motus hominum gestumque sequentem;
 nam nil esse potest aliud nisi lumine cassus
 aer id quod nos umbram perhibere suemus.
 nimirum quia terra locis ex ordine certis 370
 lumine privatur solis quacumque meantes
 officimus, repletur item quod liquimus eius,
 propterea fit uti videatur, quae fuit umbra
 corporis, e regione eadem nos usque secuta.
 semper enim nova se radiorum lumina fundunt 375
 primaque dispereunt, quasi in ignem lana trahatur.
 propterea facile et spoliatur lumine terra
 et repletur item nigrasque sibi abluit umbras.
 Nec tamen hic oculos falli concedimus hilum.
 nam quocumque loco sit lux atque umbra tueri 380
 illorum est; eadem vero sint lumina necne,
 umbraque quae fuit hic eadem nunc transeat illuc,
 an potius fiat paulo quod diximus ante,

stone structures are rounded off as if by the lathe; yet they do not look like the things which are close before us and really round, but somewhat resembling them as in shadowy outline. Our shadow likewise seems to move in the sunshine and to follow our steps and mimic our action; if you think forsooth that air deprived of light can step, imitating the motions and the action of men; for that which we are wont to term shadow can be nothing but air devoid of light. Sure enough because the earth in certain spots successively is deprived of light wherever we intercept it in moving about, while that part of it which we have quitted is filled with light, therefore that which was the shadow of our body, seems to have always followed us unchanged in a direct line with us. For new rays of light ever pour in and the old are lost, just as if wool were drawn into the fire. Therefore the earth is readily stripped of light, and again filled, and cleanses itself from black shadows.

And yet in all this we do not admit that the eyes are cheated one whit. For it is their province to observe in what spot soever light and shade are; but whether the lights are still the same or not, and whether it is the same shadow which was in this spot that is now passing to that, or whether what we said a little before, is not rather the fact, this

hoc animi demum ratio discernere debet,
 nec possunt oculi naturam noscere rerum. 385
 proinde animi vitium hoc oculis adfingere noli.
 qua vehimur navi, fertur, cum stare videtur;
 quae manet in statione, ea praeter creditur ire.
 et fugere ad puppim colles campique videntur
 quos agimus praeter navem velisque volamus. 390
 sidera cessare aetheriis adfixa cavernis
 cuncta videntur, et adsiduo sunt omnia motu,
 quandoquidem longos obitus exorta revisunt,
 cum permensa suo sunt caelum corpore claro.
 solque pari ratione manere et luna videntur 395
 in statione, ea quae ferri res indicat ipsa.
 exstantisque procul medio de gurgite montis
 classibus inter quos liber patet exitus ingens,
 insula conjunctis tamen ex his una videtur.
 atria versari et circumcursare columnae 400
 usque adeo fit uti pueris videantur, ubi ipsi
 desierunt verti, vix ut iam credere possint
 non supra sese ruere omnia tecta minari.
 iamque rubrum tremulis iubar ignibus erigere alte
 cum coeptat natura supraque extollere montes, 405

the reason of the mind, and only it, has to determine; nor can the eyes know the nature of things. Do not then impute to the eyes this frailty of the mind. The ship in which we are sailing, moves on, while seeming to stand still; that one which remains at its moorings, is believed to be passing by. The hills and fields seem to be dropping astern, past which we are driving our ship and flying under sail. The stars all seem to be at rest fast fixed to the ethereal vaults, and yet are all in constant motion, since they rise and then go back to their far-off places of setting, after they have traversed the length of heaven with their bright bodies. In like manner sun and moon seem to stay in one place, bodies which simple fact proves are carried on. And though between mountains rising up afar off from amid the waters there opens out for fleets a free passage of wide extent, yet a single island seems to be formed out of them united into one. When children have stopped turning round themselves, the halls appear to them to whirl about and the pillars to course round to such a degree, that they can scarce believe that the whole roof is not threatening to tumble down upon them. And when nature begins to raise on high the sun's beam yet ruddy with bickering fires and to lift it up above the mountains, those hills

quos tibi tum supra sol montis esse videtur
 comminus ipse suo contingens fervidus igni,
 vix absunt nobis missus bis mille sagittae,
 vix etiam cursus quingentos saepe veruti:
 inter eos solemque iacent immania ponti 410
 aequora substrata aetheriis ingentibus oris,
 interiectaque sunt terrarum milia multa
 quae variae retinent gentes et saecla ferarum.
 at conlectus aquae digitum non altior unum,
 qui lapides inter sistit per strata viarum, 415
 despectum praebet sub terras inpete tanto,
 a terris quantum caeli patet altus hiatus;
 nubila dispicere et caelum ut videare videre,
 cetera mirando sub terras abdita caelo.
 denique ubi in medio nobis ecus acer obhaesit 420
 flumine et in rapidas amnis despeximus undas,
 stantis equi corpus transversum ferre videtur
 vis et in adversum flumen contrudere raptim,
 et quocumque oculos traiecimus omnia ferri
 et fluere adsimili nobis ratione videntur. 425
 porticus aequali quamvis est denique ductu
 stansque in perpetuum paribus suffulta columnis,

above which the sun then seems to you to be, as blazing close at hand he dyes them with his own fire, are distant from us scarce two thousand arrow-flights, yea often scarce five hundred casts of a javelin; and yet between them and the sun lie immense levels of sea, spread out below the huge borders of ether, and many thousands of lands are between, held by diverse peoples and races of wild beasts. Then a puddle of water not more than a finger-breadth deep, which stands between the stones in the streets, offers a prospect beneath the earth of a reach as vast, as that with which the high yawning mouth of heaven opens out above the earth; so that you seem to discern clouds and see the sky and all the other objects far withdrawn into that wondrous sky beneath the earth. Again when our stout horse has stuck in the middle of a river and we have looked down on the swift waters of the stream, some force seems to carry athwart the current the body of the horse which is standing still and to force it rapidly up the stream; and to whatever point we cast our eyes about, all things seem to be carried on and to be flowing in the same way as we are. Again although a portico runs in parallel lines from one end to the other and stands supported by equal columns along its whole extent, yet when

longa tamen parte ab summa cum tota videtur,
 paulatim trahit angusti fastigia coni,
 tecta solo iungens atque omnia dextera laevis 430
 donec in obscurum coni conduxit acumen.
 in pelago nautis ex undis ortus in undis
 sol fit uti videatur obire et condere lumen;
 quippe ubi nil aliud nisi aquam caelumque tuentur;
 ne leviter credas labefactari undique sensus. 435
 at maris ignaris in portu clauda videntur
 navigia aplustris fractis obnitier undae.
 nam quaecumque supra rorem salis edita pars est
 remorum, recta est, et recta superne gubernata:
 quae demersa liquorem obeunt, refracta videntur 440
 omnia converti sursumque supina reverti
 et reflexa prope in summo fluitare liquore.
 raraque per caelum cum venti nubila portant
 tempore nocturno, tum splendida signa videntur
 labier adversum nimbos atque ire superne 445
 longe aliam in partem ac vera ratione feruntur.
 at si forte oculo manus uni subdita supter
 pressit eum, quodam sensu fit uti videantur
 omnia quae tuimur fieri tum bina tuendo,

from the top of it it is seen in its entire length, it gradually forms the contracted top of a narrowing cone, until uniting roof with floor and all the right side with the left it has brought them together into the vanishing point of a cone. To sailors on the sea the sun appears to rise out of the waters and in the waters to set and bury his light; just because they behold nothing but water and sky; that you may not lightly suppose the credit of the senses to be shaken on all hands. Then to people unacquainted with the sea ships in harbour seem to be all askew and with poop-fittings broken to be pressing up against the water. For whatever part of the oars is raised above the salt water, is straight, and the rudders in their upper half are straight: the parts which are sunk below the water-level, appear to be broken and bent round and to slope up and turn back towards the surface and to be so much twisted back as wellnigh to float on the top of the water. And when the winds carry the thinly scattered clouds across heaven in the night-time, then do the glittering signs appear to glide athwart the rack and to be travelling on high in a direction quite different to their real course. Then if our hand chance to be placed beneath one eye and press it below, through a certain sensation all things which we look at appear

bina lucernarum florentia lumina flammis 450
 binaque per totas aedis geminare supellex
 et duplicis hominum facies et corpora bina.
 denique cum suavi devinxit membra sopore
 somnus et in summa corpus iacet omne quiete,
 tum vigilare tamen nobis et membra movere 455
 nostra videmur, et in noctis caligine caeca
 cernere censemus solem lumenque diurnum,
 conclusoque loco caelum mare flumina montis
 mutare et campos pedibus transire videmur,
 et sonitus audire, severa silentia noctis 460
 undique cum constant, et reddere dicta tacentes.
 cetera de genere hoc mirando multa videmus,
 quae violare fidem quasi sensibus omnia quaerunt,
 nequiquam, quoniam pars horum maxima fallit
 propter opinatus animi quos addimus ipsi, 465
 pro visis ut sint quae non sunt sensibu' visa.
 nam nil aegrius est quam res discernere apertas
 ab dubiis, animus quas ab se protinus addit.
 Denique nil sciri siquis putat, id quoque nescit
 an sciri possit, quoniam nil scire fatetur. 470
 hunc igitur contra mittam contendere causam,
 qui capite ipse sua in statuit vestigia sese.

then to become double as we look; the light of lamps brilliant with flames to be double, double too the furniture through the whole house, double men's faces and men's bodies. Again when sleep has chained down our limbs in sweet slumber and the whole body is sunk in profound repose, yet then we seem to ourselves to be awake and to be moving our limbs, and mid the thick darkness of night we think we see the sun and the daylight; and though in a confined room, we seem to be passing to new climates seas rivers mountains and to be crossing plains on foot and to hear noises, though the austere silence of night prevails all round, and to be uttering speech though quite silent. Many are the other things of this marvellous sort we see, which all seek to shake as it were the credit of the senses: quite in vain, since the greatest part of these cases cheats us on account of the mental suppositions which we add of ourselves, taking those things as seen which have not been seen by the senses. For nothing is harder than to separate manifest facts from doubtful which the mind without hesitation adds on of itself.

Again if a man believe that nothing is known, he knows not whether this even can be known, since he admits he knows nothing. I will therefore decline to argue the case against him who places himself with

et tamen hoc quoque uti concedam scire, at id ipsum
 quaeram, cum in rebus veri nil viderit ante,
 unde sciat quid sit scire et nescire vicissim, 475
 notitiam veri quae res falsique crearit
 et dubium certo quae res differre probarit.
 invenies primis ab sensibus esse creatam
 notitiem veri neque sensus posse refelli.
 nam maiore fide debet reperiri illud, 480
 sponte sua veris quod possit vincere falsa.
 quid maiore fide porro quam sensus haberi
 debet? an ab sensu falso ratio orta valebit
 dicere eos contra, quae tota ab sensibus orta est?
 qui nisi sunt veri, ratio quoque falsa fit omnis. 485
 an poterunt oculos aures reprehendere, an aures
 tactus? an hunc porro tactum sapor arguet oris,
 an confutabunt nares oculive revincent?
 non, ut opinor, ita est. nam seorsum cuique potestas
 divisast, sua vis cuiquest, ideoque necesse est 490
 et quod molle sit et gelidum fervensve *seorsum*
 et seorsum varios rerum sentire colores
 et quaecumque coloribu' sint coniuncta *videre*.
 seorsus item sapor oris habet vim, seorsus odores

head where his feet should be. And yet granting that he knows this, I
 would still put this question, since he has never yet seen any truth in
 things, whence he knows what knowing and not knowing severally are,
 and what it is that has produced the knowledge of the true and the false
 and what has proved the doubtful to differ from the certain. You will
 find that from the senses first has proceeded the knowledge of the true
 and that the senses cannot be refuted. For then that something ought
 to be discovered which is of greater credit than they, able of itself to
 refute things false by true things. Well then what can fairly be
 accounted worthy of greater credit than sense? Shall reason founded
 on false sense be able to contradict them, wholly founded as it is on the
 senses? and if they are not true, then all reason as well is rendered
 false. Or shall the ears be able to take the eyes to task, or the touch
 the ears? Again shall the taste call in question this touch, or the
 nostrils refute or the eyes controvert it? Not so I guess; for each
 apart has its own distinct office, each its own power; and therefore we
 must perceive what is soft and cold or hot by one distinct faculty, by
 another perceive the different colours of things and see all the qualities
 conjoined with colour. Taste too has its faculty apart; smells spring

nascuntur, sorsum sonitus. ideoque necesse est 495
 non possint alios alii convincere sensus.
 nec porro poterunt ipsi reprehendere sese,
 aequa fides quoniam debebit semper haberi.
 proinde quod in quoquest his visum tempore, verumst.
 et si non poterit ratio dissolvere causam, 500
 cur ea quae fuerint iuxtim quadrata, procul sint
 visa rutunda, tamen praestat rationis egentem
 reddere mendose causas utriusque figurae,
 quam manibus manifesta suis emittere quoquam
 et violare fidem primam et convellere tota 505
 fundamenta quibus nixatur vita salusque.
 non modo enim ratio ruat omnis, vita quoque ipsa
 concidat extemplo, nisi credere sensibus ausis
 praecipitisque locos vitare et cetera quae sint
 in genere hoc fugienda, sequi contraria quae sint. 510
 illa tibi est igitur verborum copia cassa
 omnis quae contra sensus instructa paratast.
 denique ut in fabrica, si pravast regula prima,
 normaue si fallax rectis regionibus exit,
 et libella aliqua si ex parti claudicat hilum, 515
 omnia mendose fieri atque obstipa necesse est
 prava cubantia prona supina atque absona tecta,

from one source, sounds from another. It must follow therefore that any one sense cannot confute any other. No nor can any sense take itself to task, since equal credit must be assigned to it at all times. What therefore has at any time appeared true to each sense, is true. And if reason shall be unable to explain away the cause why things which close at hand were square, at a distance looked round, it yet is better, if you are at a loss for the reason, to state erroneously the causes of each shape, than to let slip from your grasp on any side things manifest and ruin the groundwork of belief and wrench up all the foundations on which rest life and existence. For not only would all reason give way, life itself would at once fall to the ground, if you dare not trust the senses and shun precipices and all things else of this sort that are to be avoided, and pursue the opposite things. All that host of words then is quite unmeaning, which has been drawn out in array against the senses. Once more, as in a building, if the rule first applied is wry, and the square is untrue and swerves from its proper lines, and if there is the slightest hitch in any part of the level, all the construction must be faulty, all must be wry crooked sloping, leaning forwards, leaning backwards, without symmetry, so that some parts seem ready to fall, others

iam ruere ut quaedam videantur velle, ruantque
 prodita iudiciis fallacibus omnia primis,
 sic igitur ratio tibi rerum prava necessest 520
 falsaque sit, falsis quaecumque ab sensibus ortast.

Nunc alii sensus quo pacto quisque suam rem
 sentiat, haudquaquam ratio scruposa relictā est.

Principio auditur sonus et vox omnis, in auris
 insinuata suo pepulere ubi corpore sensum. 525

corpoream *vocem* quoque enim constare fatendumst
 et sonitum, quoniam possunt inpellere sensus.

praeterea radit vox fauces saepe facitque
 asperiora foras gradiens arteria clamor.

quippe per angustum turba maiore coorta 530

ire foras ubi coeperunt primordia vocum,

scilicet expleti quoque ianua raditur oris.

haud igitur dubiumst quin voces verbaque constant
 corporeis e principiis, ut laedere possint.

nec te fallit item quid corporis auferat et quid 535

detrahat ex hominum nervis ac viribus ipsis

perpetuus sermo nigrae noctis ad umbram

aurorae perductus ab exoriente nitore,

praesertim si cum summost clamore profusus.

ergo corpoream *vocem* constare necessest, 540

do fall, ruined all by the first erroneous measurements ; so too all reason of things must needs prove to you distorted and false, which is founded on false senses.

And now to explain in what way the other senses do each perceive their several objects, is the nowise arduous task which is still left.

In the first place all sound and voice is heard when they have made their way into the ears and have struck with their body the sense of hearing. For voice too and sound you must admit to be bodily, since they are able to act upon the senses. Again voice often abrades the throat, and shouting in passing forth makes the windpipe more rough : when to wit a larger mass has gathered and the first-beginnings of voices have commenced to pass abroad through their strait passage, you are to know the door of the mouth how crammed itself is abraded. There is no doubt then that voices and words consist of bodily first-beginnings, with the power to hurt ; nor can you fail to know how much of body is taken away and how much is withdrawn from men's very sinews and strength by a speech continued without interruption from the dawning brightness of morning to the shadow of black night, above all if it has been poured forth with much loud shouting. Voice therefore must be bodily, since

multa loquens quoniam amittit de corpore partem.

551 asperitas autem vocis fit ab asperitate
principiorum et item levor levore creatur.

542 nec simili penetrant auris primordia forma,
cum tuba depresso graviter sub murmurē mugit 545
et reboat raucum regio cita barbara bombum,

545 et validis cygni torrentibus ex Heliconis
cum liquidam tollunt lugubri voce querellam.

Hasce igitur penitus voces cum corpore nostro
exprimimus rectoque foras emittimus ore, 550
mobilis articulatur verborum daedala lingua

550 formaturaque laborum pro parte figurat.

553 hoc ubi non longum spatiumst unde una profecta
perveniat vox quaeque, necessest verba quoque ipsa
plane exaudiri discernique articulatim; 555

servat enim formaturam servatque figuram.

at si interpositum spatium sit longius aequo,

aera per multum confundi verba necessest
et conturbari vocem, dum transvolat auras.

ergo fit, sonitum ut possis sentire neque illam 560
internoscere, verborum sententia quæ sit:

usque adeo confusa venit vox inque pedita.

a man by much speaking loses a portion from his body. Next roughness of voice comes from roughness of the first-beginnings, as smoothness is produced from smoothness. Nor are the first-beginnings of like shape which pierce the ears in these two cases : when the trumpet brays dully in deep low tones, the barbarian country round echoing back the hoarse hollow sound, and when swans from the headstrong torrents of Helicon raise their clear-toned dirge with plaintive voice.

When therefore we force these voices forth from the depths of our body and discharge them straight out at the mouth, the pliant tongue deft fashioner of words gives them articulate utterance and the structure of the lips does its part in shaping them. Therefore when the distance is not long between the point from which each several voice has started and that at which it arrives, the very words too must be plainly heard and distinguished syllable by syllable ; for each voice retains its structure and retains its shape. But if the space between be more than is suitable, the words must be huddled together in passing through much air and the voice be disorganised in its flight through the same. Therefore it is that you can hear a sound, yet cannot distinguish what the meaning of the words is : so huddled and hampered is the voice when it comes. Again

praeterea verbum saepe unum perciet auris
 omnibus in populo, missum praeconis ab ore.
 in multas igitur voces vox una repente 565
 diffugit, in privas quoniam se dividit auris
 obsignans formam verbi clarumque sonorem.
 at quae pars vocum non auris incidit ipsas,
 praeterlata perit frustra diffusa per auras.
 pars solidis adlisa locis reiecta sonorem 570
 reddit et interdum frustratur imagine verbi.
 quae bene cum videas, rationem reddere possis
 tute tibi atque aliis, quo pacto per loca sola
 saxa paris formas verborum ex ordine reddant,
 palantis comites quom montis inter opacos 575
 quaerimus et magna dispersos voce ciemus.
 sex etiam aut septem loca vidi reddere vocis,
 unam cum iaceres: ita colles collibus ipsi
 verba repulsantes iterabant docta referri.
 haec loca capripedes satyros nymphasque tenere 580
 finitimi fingunt et faunos esse locuntur
 quorum noctivago strepitu ludoque iocanti
 adfirmant volgo taciturna silentia rumpi
 chordarumque sonos fieri dulcisque querellas,
 tibia quas fundit digitis pulsata canentum, 585

a single word often stirs the ears of a whole assembly of people, when uttered by the crier's mouth. One voice therefore in a moment starts asunder into many voices, since it distributes itself separately into all the ears, stamping upon them the form and distinct sound of the word. But such of the voices as do not fall directly on the ears, are carried past and lost, fruitlessly dispersed in air: some striking upon solid spots are thrown back and give back a sound and sometimes mock by an echo of the word. Now that you fully perceive all this, you may explain to yourself and others how it is that in lonely spots rocks give back in regular succession forms of words like to those sent forth, when we seek our comrades straying about among the darkened hills and with loud voice call upon them scattered abroad. I have seen places give back as many as six or seven voices, when you sent forth one: in such wise did the very hills dash back on hills and repeat the words thus trained to come back. These spots the people round fancy that the goat-footed satyrs and nymphs inhabit, and tell that they are the fauns by whose night-pervading noise and sportive play as they declare the still silence is broken and sounds produced of stringed instruments and sweet plaintive melodies, such as the pipe pours forth when beaten by the fingers of the

et genus agricolum late sentiscere, quom Pan
 pinea semiferi capitis velamina quassans
 unco saepe labro calamos percurrit hiantis,
 fistula silvestrem ne cesset fundere musam.
 cetera de genere hoc monstra ac portenta loquuntur, 590
 ne loca deserta ab divis quoque forte putentur
 sola tenere. ideo iactant miracula dictis
 aut aliqua ratione alia ducuntur, ut omne
 humanum genus est avidum nimis auricularum.

Quod superest, non est mirandum qua ratione, 595
 per loca quae nequeunt oculi res cernere apertas,
 haec loca per voces veniant aurisque lacesant.
 colloquium clausis foribus quoque saepe videmus,
 nimirum quia vox per flexa foramina rerum
 incolumis transire potest, simulacra renutant; 600
 perscinduntur enim, nisi recta foramina tranant,
 qualia sunt vitrei, species qua travolat omnis.
 praeterea partis in cunctas dividitur vox,
 ex aliis aliae quoniam gignuntur, ubi una
 dissuluit semel in multas exorta, quasi ignis 605
 saepe solet scintilla suos se spargere in ignis.
 ergo replentur loca vocibus, abdita retro

players ; the country-people hearing far and wide, what time Pan nodding the piny covering of his head half a beast's oft runs over the gaping reeds with curved lip, making the pipe without ceasing to pour forth its woodland song. Other such like prodigies and marvels they tell of, that they may not haply be thought to inhabit lonely places, abandoned even by the gods. On this account they vaunt such wonders in their stories or are led on by some other reason ; inasmuch as the whole race of man is all too greedy after listening ears.

To proceed, you need not wonder how it is that through places, through which the eyes cannot see plain things, voices come and strike the ears. We often see a conversation go on even through closed doors, sure enough because the voice can pass uninjured through the winding openings of things, while idols refuse to pass: they are torn to shreds, if the openings through which they glide are not straight, like those of glass, through which every image passes. Again a voice distributes itself in all directions, since voices are begotten one out of another, when a single voice has once gone forth and sprung into many, as a spark of fire is often wont to distribute itself into its constituent fires. Therefore places are filled with voices, which though far withdrawn out

omnia quae circum fervunt sonituque cientur.
 at simulacra viis directis omnia tendunt
 ut sunt missa semel; quapropter cernere nemo 610
 saepem ultra potis est, at voces accipere extra.
 et tamen ipsa quoque haec, dum transit clausa *domorum*,
 vox optunditur atque auris confusa penetrat
 et sonitum potius quam verba audire videmur.
 Nec, qui sentimus sucum, lingua atque palatum - 615
 plusculum habent in se rationis plus operaeve.
 principio sucum sentimus in ore, cibum cum
 mandendo exprimimus, ceu plenam spongiam aquai
 siquis forte manu premere ac siccare coëpit.
 inde quod exprimimus per caulas omne palati 620
 diditur et rarae perplexa foramina linguae.
 hoc ubi levia sunt manantis corpora suci,
 suaviter attingunt et suaviter omnia tractant
 umida linguae circum sudantia templa.
 at contra pungunt sensum lacerantque coorta, 625
 quanto quaeque magis sunt asperitate repleta.
 deinde voluptas est e suco fine palati;
 cum vero deorsum per fauces praecipitavit,
 nulla voluptas est, dum diditur omnis in artus.

of view yet are all in commotion and stirred by sound. But idols all proceed in straight courses as soon as they have been discharged; and therefore you can never see beyond a wall, but you may hear voices outside it. And yet this very voice even in passing through the walls of houses is blunted and enters the ears in a huddled state, and we seem to hear the sound rather than the actual words.

The tongue and palate whereby we perceive flavour, have not in them anything that calls for longer explanation or offers more difficulty. In the first place we perceive flavour in the mouth when we press it out in chewing our food, in the same way as when one haply begins to squeeze with his hand and dry a sponge full of water. Next the whole of what we press out distributes itself through the cavities of the palate and the intricate openings of the porous tongue. Therefore when the bodies of oozing flavour are smooth, they pleasantly touch and pleasantly feel all the parts about the moist exuding quarters of the palate. But on the other hand when they are gathered in a mass they puncture and tear the sense according to the degree in which they are pervaded by roughness. Next the pleasure from the flavour reaches as far as the palate; when however it has passed down through the throat, there is no pleasure while it is all distributing itself into the frame. And it

nec refert quicquam quo victu corpus alatur, 630
 dummodo quod capias concoctum didere possis
 artubus et stomachi umidulum servare tenorem.

Nunc aliis alius qui sit cibi' suavis et almus
 expediam, quareve, aliis quod triste et amarumst,
 hoc tamen esse aliis possit perdulce videri, 635
 tantaque *in* his rebus distantia differitasque,
 ut quod ali cibus est aliis fuat acre venenum.
 esse ita quit serpens, hominis quae tacta salivis
 disperit ac sese mandendo conficit ipsa.

praeterea nobis veratrum est acre venenum, 640
 at capris adipēs et coturnicibus auget.
 ut quibus id fiat rebus cognoscere possis,
 principio meminisse decet quae diximus ante,
 semina multimodis in rebus mixta teneri.

porro omnes quaecumque cibum capiunt animantes, 645
 ut sunt dissimiles extrinsecus et generatim
 extima membrorum circumcaesura coeracet,
 proinde et seminibus constant variante figura.

semina cum porro distent, differre necessest
 intervalla viasque, foramina quae perhibemus, 650
 omnibus in membris et in ore ipsoque palato.

makes no matter what the food is with which the body is nurtured, provided you can digest what you take and transmit it into the frame and keep the stomach in an equable condition of moistness.

I will now explain how it is that different food is pleasant and nutritious for different creatures; also why that which to some is nauseous and bitter, may yet to others seem passing sweet; and why in these matters the difference and discrepancy is so great that what to one man is food, to another is rank poison: thus there may exist a serpent which on being touched by a man's spittle wastes away and destroys itself by gnawing its body. Again hellebore for us is rank poison, but helps to fatten goats and quails. That you may know how this comes to pass, first of all you must remember what we have said before, that the seeds which are contained in things are mixed up in manifold ways. Again all living creatures soever which take food, even as they are unlike on the outside, and differing after the kind of each an exterior contour of limbs bounds them, so likewise are they formed of seeds of varying shape. Again since the seeds differ, there must be a discrepancy in the spaces between and the passages, which we name openings, in all the limbs and mouth and palate as well. Some seeds

esse minora igitur quaedam maioraque debent,
 esse triquetra aliis, aliis quadrata necessest,
 multa rutunda, modis multis multangula quaedam.
 namque figurarum ratio ut motusque repossunt, 655
 proinde foraminibus debent differre figurae,
 et variare viae proinde ac textura coerces.
 hoc ubi quod suave est aliis aliis fit amarum,
 illi, cui suave est, levissima corpora debent
 contractabiliter caulas intrare palati, 660
 at contra quibus est eadem res intus acerba,
 aspera nimirum penetrant hamataque fauces.
 nunc facile est ex his rebus cognoscere quaeque.
 quippe ubi cui febris bili superante coorta est
 aut alia ratione aliquast vis excita morbi, 665
 perturbatur ibi iam totum corpus et omnes
 commutantur ibi positurae principiorum;
 fit prius ad sensum *ut* quae corpora conveniebant
 nunc non convenient, et cetera sint magis apta,
 quae penetrata queunt sensum progignere acerbum; 670
 utraque enim sunt in mellis commixta sapore;
 id quod iam supera tibi saepe ostendimus ante.

therefore must be smaller, some larger; some things must have three-
 cornered, others square seeds; many seeds must be round, some many-
 angled after many fashions. For as the relation between the shapes of
 seeds and their motions require, the openings also must differ accord-
 ingly in their shapes; and the passages must vary, as varies the texture
 formed by the seeds which bound them. For this reason when that
 which is sweet to some becomes bitter to others, for that creature to
 whom it is sweet the smoothest bodies must enter the cavities of the
 palate with power to feel them all over; but on the other hand in the
 case of those to whom the same thing is bitter within, rough and
 barbed seeds sure enough pass down the throat. It is easy now from
 these principles to understand all particular cases: thus when a fever
 has attacked any one from too great a flow of bile, or a violent disease
 has been excited in any other way, thereupon the whole body is dis-
 ordered and all the arrangements of particles then and there changed;
 the consequence of which is that the bodies which before were suited to
 excite sensation, suit no more; and those fit it better, which are able to
 make their way in and beget a bitter sense. Both kinds for instance
 are mixed up in the flavour of honey: a point we have often proved
 before.

Nunc age quo pacto naris adiectus odoris
 tangat agam. primum res multas esse necessest
 unde fluens volvat varius se fluctus odorum, 675
 et fluere et mitti volgo spargique putandumst;
 verum aliis alius magis est animantibus aptus
 dissimilis propter formas. ideoque per auras
 mellis apes quamvis longe ducuntur odore,
 volturiique cadaveribus. tum fissa ferarum 680
 ungula quo tulerit gressum permissa canum vis
 ducit, et humanum longe praesentit odorem
 Romulidarum arcis servator candidus anser.
 sic aliis alius nidor datus ad sua quemque
 pabula ducit et a taetro resilire veneno 685
 cogit, eoque modo servantur saecula ferarum.

Hic odor ipse igitur, naris quicumque lacescit,
 est alio ut possit permitti longius alter;
 sed tamen haud quisquam tam longe fertur eorum
 quam sonitus, quam vox, mitto iam dicere quam res 690
 quae feriunt oculorum acies visumque lacescunt.
 errabundus enim tarde venit ac perit ante
 paulatim facilis distractus in aeris auras;
 ex alto primum quia vix emittitur ex re:

Now mark me, and I will discuss the way in which the contact of smell affects the nostrils: and first there must be many things from which a varied flow of smells streams and rolls on; and we must suppose that they thus stream and discharge and disperse themselves among all things alike; but one smell fits itself better to one creature, another to another on account of their unlike shapes; and therefore bees are drawn on by the smell of honey through the air to a very great distance, and so are vultures by carcasses. Also the far-reaching power of scent in dogs leads them on whithersoever the cloven hoof of wild beasts has carried them in their course; and the smell of man is felt far away by the saviour of the Romans' citadel, the bright white goose. Thus different scents assigned to different creatures lead each to its appropriate food and constrain them to recoil from nauseous poison, and in this way the races of beasts are preserved.

Of all these different smells then which strike the nostrils one may reach to a much greater distance than another; though none of them is carried so far as sound, as voice, to say nothing of things which strike the eyesight and provoke vision. For in its mazy course each comes slowly on and is sooner lost, being gradually dispersed into the readily receiving expanse of air; first because coming out of its depths it with

nam penitus fluere atque recedere rebus odores 695
 significat quod fracta magis redolere videntur
 omnia, quod contrita, quod igni conlabefacta:
 deinde videre licet maioribus esse creatum
 principiis quam vox, quoniam per saxea saepta
 non penetrat, qua vox volgo sonitusque feruntur. 700
 quare etiam quod olet non tam facile esse videbis
 investigare in qua sit regione locatum;
 refrigescit enim cunctando plaga per auras
 nec calida ad sensum decurrunt nuntia rerum.
 errant saepe canes itaque et vestigia quaerunt. 705
 [Nec tamen hoc solis in odoribus atque saporum
 in generest, sed item species rerum atque colores
 non ita conveniunt ad sensus omnibus omnes,
 ut non sint aliis quaedam magis acria visu.
 quin etiam gallum, noctem explaudentibus alis 710
 auroram clara consuetum voce vocare,
 noenu queunt rabidi contra constare leones
 inque tueri: ita continuo meminere fugai,
 nimirum quia sunt gallorum in corpore quaedam
 semina, quae cum sunt oculis inmissa leonum, 715
 pupillas interfodiunt acremque dolorem

difficulty discharges itself from the thing: for the fact that all things are found to have a stronger smell when crushed, when pounded, when broken up by fire shews that odours stream and withdraw from the inner parts of things: next you may see that smell is formed of larger first-beginnings than voice, since it does not pass through stone walls, through which voice and sound pass without fail. For this reason also you will find that it is not so easy to trace out in what quarter a thing which smells is situated; for the blow cools down as it loiters through the air, and the courier particles of things are no longer hot when they finish their race to sense; for which reason dogs are often at fault and lose the scent.

But what I have said is not found in smells and in the class of flavours only, but also the forms and colours of things are not all so well suited to the senses of all, but that some will be more distressing to the sight than others. Moreover ravenous lions cannot face and bear to gaze upon a cock with flapping wings putting night to rout and wont to summon morning with shrill voice: in such wise they at once bethink themselves of flight, because sure enough in the body of cocks are certain seeds, and these, when they have been discharged into the eyes of lions, bore into the pupils and cause such sharp pain that fierce

praebent, ut nequeant contra durare feroces;
 cum tamen haec nostras acies nil laedere possint,
 aut quia non penetrant aut quod penetrantibus illis
 exitus ex oculis liber datur, in remorando 720
 laedere ne possint ex ulla lumina parte.]

Nunc age quae moveant animum res accipe, et unde
 quae veniunt veniant in mentem percipe paucis.
 principio hoc dico, rerum simulacra vagari
 multa modis multis in cunctas undique partis 725
 tenvia, quae facile inter se iunguntur in auris,
 obvia cum veniunt, ut aranea bratteaque auri.
 quippe etenim multo magis haec sunt tenvia textu
 quam quae percipiunt oculos visumque lacesunt,
 corporis haec quoniam penetrant per rara cientque 730
 tenvem animi naturam intus sensumque lacesunt.
 Centauros itaque et Scyllarum membra videmus
 Cerbereasque canum facies simulacraque eorum
 quorum morte obita tellus amplectitur ossa;
 omne genus quoniam passim simulacra feruntur, 735
 partem sponte sua quae fiunt aere in ipso,
 partim quae variis ab rebus cumque recedunt
 et quae confiunt ex horum facta figuris.

though they be, they cannot continue to face them; while at the same time these things cannot hurt at all our sight, either because they do not enter in or because the moment they enter a free passage out of the eyes is granted them, so that they cannot by staying behind hurt the eyes in any part.

Now mark, and hear what things move the mind, and learn in a few words whence the things which come into it do come. I say first of all that idols of things wander about many in number in many ways in all directions round, extremely thin; and these when they meet, readily unite, like a cobweb or piece of gold-leaf. For these idols are far thinner in texture than those which take possession of the eyes and provoke vision; since these enter in through the porous parts of the body and stir the fine nature of the mind within and provoke sensation. Therefore we see Centaurs and limbs of Scylla and Cerberus-like faces of dogs and idols of those who are dead and whose bones earth holds in its embrace; since idols of every kind are everywhere borne about, partly those which are spontaneously produced within the air, partly all those which withdraw from various things and those which are formed by compounding the shapes of these. For assuredly no image of

nam certe ex vivo Centauri non fit imago,
 nulla fuit quoniam talis natura animantis; 740
 verum ubi equi atque hominis casu convenit imago,
 haerescit facile extemplo, quod diximus ante,
 propter subtilem naturam et tenvia texta.
 cetera de genere hoc eadem ratione creantur.
 quae cum mobiliter summa levitate feruntur, 745
 ut prius ostendi, facile uno commovet ictu
 quaelibet una animum nobis subtilis imago;
 tenvis enim mens est et mire mobilis ipsa.

Haec fieri ut memoro, facile hinc cognoscere possis.
 quatenus hoc simile est illi, quod mente videmus 750
 atque oculis, simili fieri ratione necesse est.
 nunc igitur docui quoniam me forte leonem
 cernere per simulacra, oculos quaecumque lacesunt,
 scire licet mentem simili ratione moveri,
 per simulacra leonem et cetera quae videt aëque 755
 nec minus atque oculi, nisi quod mage tenvia cernit.
 nec ratione alia, cum somnus membra profudit,
 mens animi vigilat, nisi quod simulacra lacesunt
 haec eadem nostros animos quae cum vigilamus,
 usque adeo, certe ut videamur cernere eum quem 760

Centaur is formed out of a live one, since no such nature of living creature ever existed; but when images of a horse and a man have by chance come together, they readily adhere at once, as we said before, on account of their fine nature and thin texture. All other things of the kind are produced in like fashion. And when these from extreme lightness are borne on with velocity, as I shewed before, any one composite image you like moves the mind by a single stroke; for the mind is fine and is itself wondrously nimble.

That all this is done as I relate you may easily learn from what follows. So far as the one result is like the other, that which we see with the mind and with the eyes, must be produced in a like way. Well then since I have shewn that I perceive for instance a lion by means of idols which provoke the eyes, you may be sure that the mind is moved in a like way, which by means of idols sees a lion or anything else just as well as the eyes, with this difference that it perceives much thinner idols. And when sleep has prostrated the body, for no other reason does the mind's intelligence wake, except because the very same idols provoke our minds which provoke them when we are awake, and to such a degree that we seem without a doubt to perceive him whom

relicta vita iam mors et terra potitast.
 hoc ideo fieri cogit natura, quod omnes
 corporis affecti sensus per membra quiescunt
 nec possunt falsum veris convincere rebus.
 praeterea meminisse iacet languetque sopore 765
 nec dissentit eum mortis letique potitum
 iam pridem, quem mens vivom se cernere credit.
 quod superest, non est mirum simulacra moveri
 bracchiaque in numerum iactare et cetera membra;
 nam fit ut in somnis facere hoc videatur imago; 770
 quippe ubi prima perit alioque est altera nata
 inde statu, prior hic gestum mutasse videtur.
 scilicet id fieri celeri ratione putandumst:
 tanta est mobilitas et rerum copia tanta
 tantaque sensibili quovis est tempore in uno 775
 copia particularum, ut possit suppeditare,
 [Multaque in his rebus quaeruntur multaque nobis
 clarandumst, plane si res exponere avemus.
 quaeritur in primis quare, quod cuique libido
 venerit, extemplo mens cogitet eius id ipsum. 780
 anne voluntatem nostram simulacra tuentur
 et simul ac volumus nobis occurrit imago,
 si mare, si terrast cordi, si denique caelum?

life has left and death and earth gotten hold of. This nature constrains to come to pass because all the senses of the body are then hampered and at rest throughout the limbs and cannot refute the unreal by real things. Moreover memory is prostrate and relaxed in sleep and protests not that he has long been in the grasp of death and destruction whom the mind believes it sees alive. Furthermore it is not strange that idols move and throw about their arms and other limbs in regular measure: for sometimes in sleep an image is seen to do this: when the first to wit has gone and a second then been born in another posture, that former one seems to have altered its attitude. This remember you must assume to take place with exceeding celerity: so great is the velocity, so great the store of things; so great in any one unit of time that sense can seize is the store of particles, out of which the supply may go on.

And here many questions present themselves and many points must be cleared up by us, if we desire to give a plain exposition of things. The first question is why, when the wish has occurred to any one to think of a thing, his mind on the instant thinks of that very thing. Do idols observe our will, and so soon as we will does an image present itself to us, if sea, if earth, aye or heaven is what we wish? Assemblies

conventus hominum pompam convivia pugnās,
 omnia sub verbone creat natura paratque? 785
 cum praesertim aliis eadem in regione locoque
 longe dissimilis animus res cogitet omnis.
 quid porro, in numerum procedere cum simulacra
 cernimus in somnis et mollia membra movere,
 mollia, mobiliter cum alternis brachia mittunt 790
 et repetunt oculis gestum pede convenienti?
 scilicet arte madent simulacra et docta vagantur,
 nocturno facere ut possint in tempore ludos.
 an magis illud erit verum? quia tempore in uno,
 cum sentimus id, et cum vox emittitur una, 795
 tempora multa latent, ratio quae comperit esse,
 propterea fit uti quovis in tempore quaeque
 praesto sint simulacra locis in quisque parata.
 et quia tenuia sunt, nisi quae contendit, acute 802
 cernere non potis est animus; proinde omnia quae sunt
 praeterea pereunt, nisi si quae ad se ipse paravit.
 ipse parat sese porro speratque futurum 805
 ut videat quod consequitur rem quamque; fit ergo.
 nonne vides oculos etiam, cum tenuia quae sunt
 cernere coeperunt, contendere se atque parare,

of men, a procession, feasts, battles, everything in short does nature at command produce and provide? and though to increase the marvel the mind of others in the same spot and room is thinking of things all quite different. What again are we to say, when we see in sleep idols advance in measured tread and move their pliant limbs, pliant I say, when in nimble wise they put out each arm in turn and represent to the eyes over and over again an action with foot that moves in time? Idols to wit are imbued with art and move about well-trained, to be able in the night-time to exhibit such plays. Or will this rather be the truth? because in one unit of time, when we can perceive it by sense and while one single word is uttered, many latent times are contained which reason finds to exist, therefore in any time you please all the several idols are at hand ready prepared in each several place. And because they are so thin, the mind can see distinctly only those which it strains itself to see; therefore all that there are besides are lost, save only such as it has taken to itself. Moreover it makes itself ready and hopes to see that which follows upon each thing; therefore the result does follow. Do you not see that the eyes also, when they essay to discern things which are thin and fine, strain themselves and make themselves ready,

nec sine eo fieri posse ut cernamus acute? 810
 et tamen in rebus quoque apertis noscere possis,
 si non advertas animum, proinde esse quasi omni
 tempore semotum fuerit longeque remotum.
 cur igitur mirumst, animus si cetera perdit
 praeterquam quibus est in rebus deditus ipse? 815
 deinde adopinamur de signis maxima parvis
 ac nos in fraudem induimus frustraminis ipsi.]

Fit quoque ut interdum non suppeditetur imago
 eiusdem generis, sed femina quae fuit ante,
 in manibus vir uti factus videatur adesse, 820
 aut alia ex alia facies aetasque sequatur.

826 quod ne miremur sopor atque oblivia curant.

822 [Illud in his rebus vitium vementer avessis
 effugere, errorem vitareque praemetuenter,
 lumina ne facias oculorum clara creata, 825

825 prospicere ut possemus, et ut proferre queamus
 proceros passus, ideo fastigia posse
 surarum ac feminum pedibus fundata plicari,
 brachia tum porro validis ex apta lacertis
 esse manusque datas utraque *ex* parte ministras, 830
 ut facere ad vitam possemus quae foret usus.
 cetera de genere hoc inter quaecumque pretantur,

and without that cannot see distinctly? And yet you may observe even in things which are plain before us, that if you do not attend, it is just as if the thing were all the time away and far distant. What wonder then, if the mind loses all other things save those with which it is itself earnestly occupied? Then too from small indications we draw the widest inferences and by our own fault entangle ourselves in the meshes of self-delusion.

Sometimes it happens too that an image of the same kind is not supplied, but what before was a woman, turns out in our hands to have changed into a man; or a different face and age succeeds to the first. But sleep and forgetfulness prevent us from feeling surprise at this.

And herein you should desire with all your might to shun the weakness, with a lively apprehension to avoid the mistake of supposing that the bright lights of the eyes were made in order that we might see; and that the tapering ends of the shanks and hams are attached to the feet as a base in order to enable us to step out with long strides; or again that the forearms were slung to the stout upper arms and ministering hands given us on each side, that we might be able to discharge the needful duties of life. Other explanations of like sort which men give,

omnia perversa praepostera sunt ratione,
 nil ideo quoniam natumst in corpore ut uti
 possemus, sed quod natumst id procreat usum. 835
 nec fuit ante videre oculorum lumina nata
 nec dictis orare prius quam lingua creatast,
 sed potius longe linguae praecessit origo
 sermonem multoque creatae sunt prius aures
 quam sonus est auditus, et omnia denique membra 840
 ante fuere, ut opinor, eorum quam foret usus;
 haud igitur potuere utendi crescere causa.
 at contra conferre manu certamina pugnae
 et lacerare artus foedareque membra cruore
 ante fuit multo quam lucida tela volarent, 845
 et volnus vitare prius natura coegit
 quam daret obiectum parmai laeva per artem.
 scilicet et fessum corpus mandare quieti
 multo antiquius est quam lecti mollia strata,
 et sedare sitim prius est quam pocula natum. 850
 haec igitur possunt utendi cognita causa
 credier, ex usu quae sunt vitaeque reperta.
 illa quidem seorsum sunt omnia quae prius ipsa
 nata dedere suae post notitiam utilitatis.
 quo genere in primis sensus et membra videmus; 855

one and all put effect for cause through wrongheaded reasoning; since nothing was born in the body that we might use it, but that which is born begets for itself a use: thus seeing did not exist before the eyes were born, nor the employment of speech ere the tongue was made; but rather the birth of the tongue was long anterior to language and the ears were made long before sound was heard, and all the limbs, I trow, existed before there was any employment for them: they could not therefore have grown for the purpose of being used. But on the other hand engaging in the strife of battle and mangling the body and staining the limbs with gore were in vogue long before glittering darts ever flew; and nature prompted to shun a wound or ever the left arm by the help of art held up before the person the defence of a shield. Yes and consigning the tired body to rest is much older than a soft-cushioned bed, and the slaking of thirst had birth before cups. These things therefore which have been invented in accordance with the uses and wants of life, may well be believed to have been discovered for the purpose of being used. Far otherwise is it with all those things which first were born, then afterwards made known the purposes to which they might be put; at the head of which class we see the senses and the limbs. Wherefore

quare etiam atque etiam procul est ut credere possis
utilitatis ob officium potuisse creari.]

[Illud item non est mirandum, corporis ipsa
quod natura cibum quaerit cuiusque animantis.
quippe etenim fluere atque recedere corpora rebus 860
multa modis multis docui, sed plurima debent
ex animalibu.' *quae* quia sunt exercita motu,
multaque per sudorem ex alto pressa feruntur,
multa per os exhalantur, cum languida anhelant,
his igitur rebus rarescit corpus et omnis 865
subruitur natura; dolor quam consequitur rem.
propterea capitur cibus ut suffulciat artus
et recreet vires interdatus atque patentem
per membra ac venas ut amorem opturet edendi.
umor item discedit in omnia *quae* loca cumque 870
poscunt umorem; glomerataque multa vaporis
corpora, *quae* stomacho praebent incendia nostro,
dissupat adveniens liquor ac restinguit ut ignem,
urere ne possit calor amplius aridus artus.
sic igitur tibi anghela sitis de corpore nostro 875
abluatur, sic expletur ieiuna cupido.]

Nunc qui fiat uti passus proferre queamus,

again and again I repeat, it is quite impossible to believe that they could have been made for the duties which they discharge.

It ought likewise to cause no wonder that the nature of the body of each living creature absolutely requires food. I have shewn that bodies ebb away and withdraw from things, many in number in many ways; but most numerous must be those which withdraw from living things; for because these are tried by active motion, and many particles are pressed out from the depths of the frame and carried off by sweating, many breathed out through the mouth, when they pant from exhaustion, from such causes the body becomes rarefied and the whole nature undermined; and this state is attended by pain. Food therefore is taken in order to give support to the frame and recruit the strength by its infusion, and to close up the open-mouthed craving for meat throughout limbs and veins. The moisture too passes into all the parts which call for moisture; and many accumulated bodies of heat which cause a burning in our body, the approach of liquid scatters and quenches as if they were fire, so that dry heat can no longer parch the frame. In this way then you see gasping thirst is drenched out of our body, in this way the hungry craving is satisfied.

Now how it comes to pass that we are able to step out when we

cum volumus, varieque datum sit membra movere,
 et quae res tantum hoc oneris protrudere nostri
 corporis insuerit, dicam: tu percipe dicta. 880
 dico animo nostro primum simulacra meandi
 accidere atque animum pulsare, ut diximus ante.
 inde voluntas fit; neque enim facere incipit ullam
 rem *quisquam*, quam mens providit quid velit ante.
 id quod providet, illius rei constat imago. 885
 ergo animus cum sese ita commovet ut velit ire
 inque gredi, ferit extemplo quae in corpore toto
 per membra atque artus animai dissita vis est.
 et facilest factu, quoniam coniuncta tenetur.
 inde ea proporro corpus ferit, atque ita tota 890
 paulatim moles protruditur atque movetur.
 praeterea tum rarescit quoque corpus et aer,
 scilicet ut debet qui semper mobilis extat,
 per patefacta venit penetratque foramina largus
 et dispargitur ad partis ita quasque minutas 895
 corporis. hic igitur rebus fit utrimque duabus,
aeque id ut ac navis velis ventoque feratur.
 nec tamen illud in his rebus mirabile constat,
 tantula quod tantum corpus corpuscula possunt

please, and how it is given us to move about our limbs, and what cause
 is wont to push forward the great load of this our body I will tell: do
 you take in my words. I say that idols of walking first present them-
 selves to our mind and strike on the mind, as we said before: then the
 will arises; for no one begins to do anything, until his mind has pre-
 determined what it wills. From the very fact that it predetermines
 such thing, there is an image of that thing. When therefore the mind
 bestirs itself in such a way as to will to walk and step out, it strikes at
 the same moment the force of the soul which is spread over the whole
 body throughout the limbs and frame; and this is easily done, since the
 whole is held in close union with the mind. Next the soul in its turn
 strikes the body, and thus the whole mass by degrees is pushed on and
 set in motion. Then again the body becomes also rarefied, and the air,
 as you see its nature is, being always so nimble in moving, comes and
 passes in great quantity through the opened pores and is thus dis-
 tributed into the most minute parts of the body. In this way then by
 these two causes acting in two different ways the body just like a ship
 is carried on by sails and wind. And herein it need not excite any
 surprise that such very minute bodies can steer so great a body and turn

contorquere et onus totum convertere nostrum. 900
 quippe etenim ventus subtili corpore tenvis
 trudit agens magnam magno molimine navem
 et manus una regit quantovis impete euntem
 atque gubernaculum contorquet quolibet unum,
 multaque per trocleas et tympana pondere magno 905
 commovet atque levi sustollit machina nisu.

Nunc quibus ille modis somnus per membra quietem
 inriget atque animi curas e pectore solvat,
 suavidicis potius quam multis versibus edam;
 parvus ut est cycni melior canor, ille gruum quam 910
 clamor in aetheriis dispersus nubibus austri.
 tu mihi da tenuis aures animumque sagacem,
 ne fieri negites quae dicam posse retroque
 vera repulsanti discedas pectore dicta,
 tutimet in culpa cum sis neque cernere possis. 915
 principio somnus fit ubi est distracta per artus
 vis animae partimque foras eiecta recessit
 et partim contrusa magis concessit in altum;
 dissoluuntur enim tum demum membra fluuntque.
 nam dubium non est, animai quin opera sit 920
 sensus hic in nobis, quem cum sopor inpedit esse,

about the whole of this our load; for wind though fine with subtle body drives and pushes on a large ship of large moving mass and one hand directs it however great the speed at which it is going and one rudder steers it to any point you like; and by means of blocks of pulleys and tread-wheels a machine stirs many things though of great weight and raises them up with slight effort.

Now by what means sleep lets a stream of repose over the limbs and dispels from the breast the cares of the mind, I will tell in sweetly worded rather than in many verses; as the short song of the swan is better than the loud noise of cranes scattered abroad amid the ethereal clouds of the south. Do you lend me a nice ear and a keen mind, that you may not deny what I say to be possible and secede with breast disdainfully rejecting the words of truth, you yourself being in fault the while and unable to discern. Sleep mainly takes place when the force of the soul has been scattered about through the frame, and in part has been forced abroad and taken its departure, and in part has been thrust back and has withdrawn into the depths of the body: after that the limbs are relaxed and droop. For there is no doubt that this sense exists in us by the agency of the soul; and when sleep obstructs the

tum nobis animam perturbatam esse putandumst
eiectamque foras; non omnem; namque iaceret
aeterno corpus perfusum frigore leti.

quippe ubi nulla latens animai pars remaneret 925
in membris, cinere ut multa latet obrutus ignis,
unde reconfliari sensus per membra repente
posset, ut ex igni caeco consurgere flamma?

Sed quibus haec rebus novitas confiat et unde
perturbari anima et corpus languescere possit, 930
expediam: tu fac ne ventis verba profundam.

principio externa corpus de parte necessum est,
aeriis quoniam vicinum tangitur auris,
tundier atque eius crebro pulsarier ictu,
proptereaue fere res omnes aut corio sunt 935
aut etiam conchis aut callo aut cortice tectae.

interiorem etiam partem spirantibus aer
verberat hic idem, cum ducitur atque reflat.
quare utrimque secus cum corpus vapulet et cum
perveniant plagae per parva foramina nobis 940
corporis ad primas partis elementaque prima,
fit quasi paulatim nobis per membra ruina.
conturbantur enim positurae principiorum
corporis atque animi. fit uti pars inde animai

action of this sense, then we must assume that our soul has been disordered and forced abroad; not indeed all; for then the body would lie steeped in the everlasting chill of death. Where no part of the soul remained behind concealed in the limbs, as fire remains concealed when buried under much ash, whence could sense be suddenly rekindled through the limbs, as flame can spring up from hidden fire?

But by what means this change of condition is accomplished and from what the soul can be disordered and the body grow faint, I will explain: do you mind that I waste not my words on the wind. In the first place the body in its outer side, since it is next to and is touched by the air, must be thumped and beaten by its repeated blows; and for this reason all things as a rule are covered either by a hide or else by shells or by a callous skin or by bark. When creatures breathe, this air at the same time buffets the inner side also, as it is inhaled and exhaled. Therefore since the body is beaten on both sides alike and blows arrive by means of the small apertures at the primal parts and primal elements of our body, there gradually ensues a sort of breaking up throughout our limbs, the arrangements of the first-beginnings of body and mind being disordered. Then next a part of the soul

eiciatur et introrsum pars abdita cedat, 945
 pars etiam distracta per artus non queat esse
 coniuncta inter se neque motu mutua fungi;
 inter enim saepit coetus natura viasque;
 ergo sensus abit mutatis motibus alte.
 et quoniam non est quasi quod suffulciat artus, 950
 debile fit corpus languescuntque omnia membra,
 bracchia palpebraeque cadunt poplitesque cubanti
 saepe tamen summittuntur virisque resolvunt.
 deinde cibum sequitur somnus, quia, quae facit aer,
 haec eadem cibus, in venas dum diditur omnis, 955
 efficit. et multo sopor ille gravissimus exstat
 quem satur aut lassus capias, quia plurima tum se
 corpora conturbant magno contusa labore.
 fit ratione eadem coniectus partim animai
 altior atque foras eiectus largior eius, 960
 et divisior inter se ac distractior in test.

Et quo quisque fere studio devinctus adhaeret
 aut quibus in rebus multum sumus ante morati
 atque in ea ratione fuit contenta magis mens,
 in somnis eadem plerumque videmur obire; 965
 causidici causas agere et componere leges,

is forced out and a part withdraws into the inner recesses; a part too scattered about through the frame cannot get united together and so act and be acted upon by motion; for nature intercepts all communication and blocks up all the passages; and therefore sense retires deep into the frame as the motions are all altered. And since there is nothing as it were to lend support to the frame, the body becomes weak and all the limbs are faint, the arms and eyelids droop and the hams even in bed often give way under you and relax their powers. Then sleep follows on food, because food produces just the same effects as air, while it is distributed into all the veins; and that sleep is much the heaviest which you take when full or tired, because then the greatest number of bodies fall into disorder, bruised by much exertion. On the same principle the soul comes in part to be forced more deeply into the frame, and there is also a more copious emission of it abroad, and at the same time it is more divided and scattered in itself within you.

And generally to whatever pursuit a man is closely tied down and strongly attached, on whatever subjects we have previously much dwelt, the mind having been put to a more than usual strain in it, in sleep we for the most part fancy that we are engaged in the same; lawyers think

induperatores pugnare ac proelia obire,
 nautae contractum cum ventis degere bellum,
 nos agere hoc autem et naturam quaerere rerum
 semper et inventam patriis exponere chartis. 970
 cetera sic studia atque artes plerumque videntur
 in somnis animos hominum frustrata tenere.
 et quicumque dies multos ex ordine ludis
 adsiduas dederunt operas, plerumque videmus,
 cum iam destiterunt ea sensibus usurpare, 975
 reliquas tamen esse vias in mente patentis,
 qua possint eadem rerum simulacra venire.
 per multos itaque illa dies eadem obversantur
 ante oculos, etiam vigilantes ut videantur
 cernere saltantis et mollia membra moventis 980
 et citharae liquidum carmen chordasque loquentis
 auribus accipere et consessum cernere eundem
 scenaique simul varios splendere decores.
 usque adeo magni refert studium atque voluptas,
 et quibus in rebus consuerint esse operati 985
 non homines solum sed vero animalia cuncta.
 quippe videbis equos fortis, cum membra iacebunt,
 in somnis sudare tamen spirareque semper

they plead causes and draw up covenants of sale, generals that they fight
 and engage in battle, sailors that they wage and carry on war with the
 winds, we think we pursue our task and investigate the nature of things
 constantly and consign it when discovered to writings in our native
 tongue. So all other pursuits and arts are seen for the most part during
 sleep to occupy and mock the minds of men. And whenever men have
 given during many days in succession undivided attention to games, we
 generally see that after they have ceased to perceive these with their
 senses, there yet remain passages open in the mind through which the
 same idols of things may enter. Thus for many days those same objects
 present themselves to the eyes, so that even when awake they see
 dancers as they think moving their pliant limbs, and receive into the
 ears the clear music of the harp and speaking strings, and behold the
 same spectators and at the same time the varied decorations of the stage
 in all their brilliancy. So great is the influence of zeal and inclination,
 so great is the influence of the things in which men have been habitually
 engaged, and not men only but all living creatures. Thus you will see
 stout horses, even when their bodies are lying down, yet in their sleep
 sweat and pant without ceasing and strain their powers to the utmost as

	et quasi de palma summas contendere viris	
	aut quasi carceribus patefactis	990
999	venantumque canes in molli saepe quiete	
991	iactant crura tamen subito vocisque repente	
	mittunt et crebro redducunt naribus auras,	
	ut vestigia si teneant inventa ferarum,	
	expergefactive secuntur inania saepe	995
995	cervorum simulacra, fugae quasi dedita cernant,	
	donec discussis redeant erroribus ad se.	
	at consueta domi catulorum blanda propago	
998	discutere et corpus de terra corripere instant	999
	proinde quasi ignotas facies atque ora tuantur.	1004
	et quo quaeque magis sunt aspera seminiorem,	
	tam magis in somnis eadem saevire necessust.	
	at variae fugiunt volucres pinnisque repente	
	sollicitant divom nocturno tempore lucos,	
	accipitres somno in leni si proelia pugnare	
	edere sunt persectantes visaeque volantes.	1010
	porro hominum mentes, magnis quae motibus edunt	
	magna, itidem saepe in somnis faciuntque geruntque,	
	reges expugnant, capiuntur, proelia miscent,	
	tollunt clamorem quasi si iugulentur ibidem.	
	multi depugnant gemitusque doloribus edunt	1015
	et quasi pantherae morsu saevire leonis	

if for the prize, or as if the barriers were thrown open * . And often during soft repose the dogs of hunters do yet all at once throw about their legs and suddenly utter cries and repeatedly snuff the air with their nostrils, as though they had found and were on the tracks of wild-beasts; and after they are awake often chase the shadowy idols of stags, as though they saw them in full flight, until they have shaken off their delusions and come to themselves again. And the fawning brood of dogs brought up tame in the house haste to shake their body and raise it up from the ground, as if they beheld unknown faces and features. And the fiercer the different breeds are, the greater rage they must display in sleep. But the various kinds of birds flee and suddenly in the night time trouble with their wings the groves of the gods, when in gentle sleep hawks have appeared to fly in pursuit and to shew fight and offer battle. Again the minds of men which pursue great aims under great emotions, often during sleep pursue and carry on the same in like manner; kings take by storm, are taken, join battle, raise a loud cry as if stabbed on the spot. Many struggle hard and utter groans in pain, and as if mangled by the bite of panther or cruel lion fill all the place with

mandantur magnis clamoribus omnia complent.
multi de magnis per somnum rebu' loquuntur
indicioque sui facti persaepe fuere.

multi mortem obeunt. multi, de montibus altis 1020

ut qui praecipitent ad terram corpore toto,
externantur et ex somno quasi mentibu' capti
vix ad se redeunt permoti corporis aestu.

flumen item sitiens aut fontem propter amoenum
adsidet et totum prope faucibus occupat amnem. 1025

puri saepe lacum propter si ac dolia curta
somno devincti credunt se extollere vestem,

totius umorem saccatum corpori' fundunt,

cum Babylonica magnifico splendore rigantur.

tum quibus aetatis freta primitus insinuatur 1030

semen, ubi ipsa dies membris matura creavit,

conveniunt simulacra foris e corpore quoque

nuntia praeclari voltus pulchrique coloris,

qui ciet inritans loca turgida semine multo,

ut quasi transactis saepe omnibu' rebu' profundant 1035

fluminis ingentis fluctus vestemque cruentent.

Sollicitatur id *in* nobis, quod diximus ante,
semen, adulta aetas cum primum roborat artus.
namque alias aliud res commovet atque lacessit;

loud cries. Many during sleep speak of important affairs and have often and often disclosed their own guilt. Many meet death; many as if tumbling down from high precipices to the ground with their whole body, are scared with terror and after sleep as if they were out of their judgment scarce come to themselves again, quite disordered by their body's turmoil. Again a thirsty man sits down beside a river or a pleasant spring and swallows down wellnigh all the stream. Cleanly people often, when sound asleep, believing that they are lifting their dress beside a urinal or the public vessels, pour forth the filtered liquid of their whole body, and the Babylonian coverlets of surpassing brilliancy are drenched. Then too those, into the boiling currents of whose age seed is for the first time passing, when the ripe fulness of days has produced it in their limbs, idols encounter from without from what body soever, harbingers of a glorious face and a beauteous bloom, which stir and excite the appropriate portions of the frame and often occasion fruitless anticipations of the pleasures of love.

That seed we have spoken of before is stirred up in us, as soon as mature age fortifies the frame. For as different causes set in motion

ex homine humanum semen ciet una hominis vis. 1040
 quod simul atque suis eiectum sedibus exit,
 per membra atque artus decedit corpore toto
 in loca conveniens nervorum certa cietque
 continuo partis genitalis corporis ipsas.
 inritata tument loca semine fitque voluntas 1045
 eicere id quo se contendit dira lubido,
 idque petit corpus, mens unde est saucia amore.
 namque omnes plerumque cadunt in vulnus et illam
 emicat in partem sanguis unde icimur ictu, 1050
 et si comminus est, hostem ruber occupat umor.
 sic igitur Veneris qui telis accipit ictus,
 sive puer membris muliebribus hunc iaculatur
 seu mulier toto iactans e corpore amorem,
 unde feritur, eo tendit gestitque coire 1055
 et iacere umorem in corpus de corpore ductum;
 namque voluptatem praesagit muta cupido.

Haec Venus est nobis; hinc autemst nomen amoris,
 hinc illaec primum Veneris dulcedinis in cor
 stillavit gutta et successit frigida cura. 1060
 nam si abest quod aves, praesto simulacra tamen sunt
 illius et nomen dulce obversatur ad auris.

and excite different things, so from man the sole influence of man draws forth human seed. As soon then as it has been forced out from and quits its proper seats, throughout the limbs and frame it withdraws itself from the whole body and meets together in appropriate places and rouses forthwith the appropriate parts of the body. The places are excited and swell with seed, and the inclination arises to emit that seed towards that to which the fell desire all tends, and the body seeks that object from which the mind is wounded by love; for all as a rule fall towards their wound and the blood spirts out in that direction whence comes the stroke by which we are struck; and if he is at close quarters, the red stream covers the foe. Thus then he who gets a hurt from the weapons of Venus, whatever be the object that hits him, be it a woman breathing love from her whole body, he inclines to the quarter whence he is wounded, and yearns to unite with it and join body with body; for a mute desire gives a presage of the pleasure.

This pleasure is for us Venus; from that desire is the Latin name of love, from that desire has first trickled into the heart yon drop of Venus' honeyed joy and soon is replaced by chilly care; for though that which you yearn for is away, yet idols of it are at hand and its sweet name is

sed fugitare decet simulacra et pabula amoris
 absterrere sibi atque alio convertere mentem
 et iacere umorem conlectum in corpora quaeque 1065
 nec retinere, semel conversum unius amore,
 et servare sibi curam certumque dolorem.
 ulcus enim vivescit et inveterascit alendo
 inque dies gliscit furor atque aerumna gravescit,
 si non prima novis conturbes vulnera plagis 1070
 volgivagaque vagus Venere ante recentia cures
 aut alio possis animi traducere motus.

Nec Veneris fructu caret is qui vitat amorem,
 sed potius quae sunt sine poena commoda sumit;
 nam certe purast sanis magis inde voluptas 1075
 quam miseris. etenim potiundi tempore in ipso
 fluctuat incertis erroribus ardor amantum
 nec constat quid primum oculis manibusque fruantur.
 quod petiere, premunt arte faciuntque dolorem
 corporis et dentes inlidunt saepe labellis 1080
 osculaque adfligunt, quia non est pura voluptas
 et stimuli subsunt qui instigant laedere id ipsum
 quodcumque est, rabies unde illaec germina surgunt.
 sed leviter poenas frangit Venus inter amorem

present to the ears. But it is meet to fly idols and scare away all that feeds love and turn your mind on another object, distract your passion elsewhere and not keep it, with your thoughts once set on one object by love of it, and so lay up for yourself care and unfailing pain. For the sore gathers strength and becomes inveterate by feeding, and every day the madness grows in violence and the misery becomes aggravated, unless you choose to erase the first wounds by new blows and first heal them when yet fresh, roaming abroad after Venus the pandemian, or transfer to something else the emotions of your mind.

Nor is he who shuns love without the fruits of Venus, but rather enjoys those blessings which are without any pain: doubtless the pleasure from such things is more unalloyed for the healthy-minded than for the love-sick; for in the very moment of enjoying the burning desire of lovers wavers and wanders undecided, and they cannot tell what first to enjoy with eyes and hands. What they have sought, they tightly squeeze and cause pain of body and often imprint their teeth on the lips and clash mouth to mouth in kissing, because the pleasure is not pure and there are hidden stings which stimulate to hurt even that whatever it is from which spring those germs of frenzy. But Venus with light hand breaks the force of these pains during love, and the fond

blandaque refrenat morsus admixta voluptas. 1085
 namque in eo spes est, unde est ardoris origo,
 restingui quoque posse ab eodem corpore flammam.
 quod fieri contra totum natura repugnat;
 unaque res haec est, cuius quom plurima habemus,
 tum magis ardescit dira cuppedine pectus. 1090
 nam cibus atque umor membris adsumitur intus;
 quae quoniam certas possunt obsidere partis,
 hoc facile expletur laticum frugumque cupido.
 ex hominis vero facie pulchroque colore
 nil datur in corpus praeter simulacra fruendum 1095
 tenvia; quae vento spes raptast saepe misella.
 ut bibere in somnis sitiens quom quaerit et umor
 non datur, ardorem qui membris stinguere possit,
 sed laticum simulacra petit frustra laborat
 in medioque sitit torrenti flumine potans, 1100
 sic in amore Venus simulacris ludit amantis
 nec satiare queunt spectando corpora coram,
 nec manibus quicquam teneris abrahere membris
 possunt errantes incerti corpore toto.
 denique cum membris conlatis flore fruuntur 1105
 aetatis, iam cum praesagit gaudia corpus
 atque in eost Venus ut muliebria conserat arva,
 adfigunt avide corpus iunguntque salivas

pleasure mingled therein reins in the bites. For in this there is hope, that from the same body whence springs their burning desire, their flame may likewise be quenched; the direct contrary of which nature protests to be the case; and this is the one thing of all, in which, when we have most of it, then all the more the breast burns with fell desire. Meat and drink are taken into the body; and as they can fill up certain fixed parts, in this way the craving for drink and bread is easily satisfied; but from the face and beauteous bloom of man nothing is given into the body to enjoy save flimsy idols; a sorry hope which is often snatched off by the wind. As when in sleep a thirsty man seeks to drink and water is not given to quench the burning in his frame, but he seeks the idols of waters and toils in vain and thirsts as he drinks in the midst of the torrent stream, thus in love Venus mocks lovers with idols, nor can bodies satisfy them by all their gazing upon them nor can they with their hands rub aught off the soft limbs, wandering undecided over the whole body. At last when they have united and enjoy the flower of age, when the body now has a presage of joys and Venus is in the mood to sow the fields of woman, they greedily clasp each other's body and

oris et inspirant pressantes dentibus ora,
 nequiquam, quoniam nil inde abradere possunt 1110
 nec penetrare et abire in corpus corpore toto;
 nam facere interdum velle et certare videntur:
 usque adeo cupide in Veneris compagibus haerent,
 membra voluptatis dum vi labefacta liquescunt.
 tandem ubi se erupit nervis conlecta cupido, 1115
 parva fit ardoris violenti pausa parumper.
 inde redit rabies eadem et furor ille revisit,
 cum sibi quid cupiant ipsi contingere quaerunt,
 nec reperire malum id possunt quae machina vincat:
 usque adeo incerti tabescunt volnere caeco. 1120

Adde quod absumunt viris pereuntque labore,
 adde quod alterius sub nutu degitur aetas.
 labitur interea res et Babylonica fiunt,
 languent officia atque aegrotat fama vacillans.
 huic lenta et pulchra in pedibus Sicyonia rident 1125
 scilicet et grandes viridi cum luce zmaragdi
 auro includuntur teriturque thalassina vestis
 adsidue et Veneris sudorem exercita potat.
 et bene parta patrum fiunt anademata, mitrae,
 interdum in pallam atque alideusia Ciaeque vertunt. 1130

suck each other's lips and breathe in, pressing meanwhile teeth on each other's mouth ; all in vain, since they can rub nothing off nor enter and pass each with his whole body into the other's body ; for so sometimes they seem to will and strive to do : so greedily are they held in the chains of Venus, while their limbs melt overpowered by the might of the pleasure. At length when the gathered desire has gone forth, there ensues for a brief while a short pause in the burning desire ; and then returns the same frenzy, then comes back the old madness, when they are at a loss to know what they really desire to get, and cannot find what device is to conquer that mischief : in such utter uncertainty they pine away by a hidden wound.

Then too they waste their strength and ruin themselves by the labour, then too their life is passed at the beck of another. Meanwhile their estate runs away and is turned into Babylonian coverlets ; duties are neglected and their good name staggers and sickens. On her feet laugh elastic and beautiful Sicyonian shoes, yes, and large emeralds with green light are set in gold and the sea-coloured dress is worn constantly and much used drinks in the sweat. The noble earnings of their fathers are turned into hair-bands, head-dresses ; sometimes are changed into a sweeping robe and alideusian and Cean dresses. Feasts set out with

eximia veste et victu convivias, ludi,
 pocula crebra, unguenta coronaeserta parantur,
 nequiquam, quoniam medio de fonte leporum
 surgit amari aliquid quod in ipsis floribus angat,
 aut cum conscius ipse animus se forte remordet 1135
 desidiose agere aetatem lustrisque perire,
 aut quod in ambiguo verbum iaculata reliquit
 quod cupido adfixum cordi vivescit ut ignis,
 aut nimium iactare oculos aliumve tueri
 quod putat in voltuque videt vestigia risus. 1140

Atque in amore mala haec proprio summeque secundo
 inveniuntur; in adverso vero atque inopi sunt,
 prendere quae possis oculorum lumine operto,
 innumerabilia; ut melius vigilare sit ante,
 qua docui ratione, cavereque ne inliciaris. 1145
 nam vitare, plagas in amoris ne iaciamur,
 non ita difficile est quam captum retibus ipsis
 exire et validos Veneris perrumpere nodos.
 et tamen implicitus quoque possis inque peditus
 effugere infestum, nisi tute tibi obvius obstes 1150
 et praetermittas animi vitia omnia primum
 aut quae corpori sunt eius, siquam petis ac vis.

rich coverlets and viands, games, numerous cups, perfumes crowns
 garlands are prepared ; all in vain, since out of the very well-spring of
 delights rises up something of bitter, to pain amid the very flowers ;
 either when the conscience-stricken mind haply gnaws itself with remorse
 to think that it is passing a life of sloth and ruining itself in brothels, or
 because she has launched forth some word and left its meaning in doubt
 and it cleaves to the love-sick heart and burns like living fire, or because
 it fancies she casts her eyes too freely about or looks on another, and it
 sees in her face traces of a smile.

And these evils are found in love returned and highly prosperous ;
 but in crossed and hopeless love are ills such as you may seize with
 closed eyes, past numbering ; so that it is better to watch beforehand in
 the manner I have prescribed, and be on your guard not to be drawn in.
 For to avoid falling into the toils of love is not so hard as, after you are
 caught, to get out of the nets you are in and to break through the strong
 meshes of Venus. And yet even when you are entangled and held fast
 you may escape the mischief, unless you stand in your own way and
 begin by overlooking all the defects of her mind or those of her body,
 whoever it is whom you court and woo. For this men usually do,

nam faciunt homines plerumque cupidine caeci
 et tribuunt ea quae non sunt his commoda vere.
 multimodis igitur pravas turpisque videmus 1155
 esse in deliciis summoque in honore vigere.
 atque alios alii inrident Veneremque süadent
 ut placent, quoniam foedo adfflictentur amore,
 nec sua respiciunt miseri mala maxima saepe.
 nigra melichrus est, immunda et fetida acosmos, 1160
 caesia Palladium, nervosa et lignea dorcas,
 parvula, pumilio, chariton mia, tota merum sal,
 magna atque inmanis cataplexis plenaque honoris.
 balba loqui non quit, traulizi, muta pudens est;
 at flagrans odiosa loquacula Lampadium fit. 1165
 ischnon eromenion tum fit, cum vivere non quit
 prae macie; rhadine verost iam mortua tussi.
 at tumida et mammosa Ceres est ipsa ab Iaccho,
 simula Silena ac saturast, labeosa philema.
 cetera de genere hoc longum est si dicere coner. 1170
 sed tamen esto iam quantovis oris honore,
 cui Veneris membris vis omnibus exoriatur:
 nempe aliae quoque sunt; nempe hac sine viximus ante;
 nempe eadem facit, et scimus facere, omnia turpi,

blinded by passion, and attribute to the beloved those advantages which are not really theirs. We therefore see women in ways manifold deformed and ugly to be objects of endearment and held in the highest admiration. And one lover jeers at others and advises them to propitiate Venus, since they are troubled by a disgraceful passion, and often, poor wretches, give no thought to their own ills greatest of all. The black is a brune, the filthy and rank has not the love of order; the cat-eyed is a miniature Pallas, the stringy and wizened a gazelle; the dumpy and dwarfish is one of the graces, from top to toe undiluted esprit; the big and overgrown is awe-inspiring and full of dignity. She is tongue-tied, cannot speak, then she has a lisp; the dumb is bashful; then the fire-spit, the teasing, the gossiping turns to a shining lamp. One becomes a slim darling then when she cannot live from want of flesh; and she is only spare, who is half-dead with cough. Then the fat and big-breasted is a Ceres' self big-breasted from Iacchus; the pug-nosed is a she Silenus and a satyress; the thick-lipped a very kiss. It were tedious to attempt to report other things of the kind. Let her however be of ever so great dignity of appearance; such that the power of Venus goes forth from all her limbs; yet there are others too; yet have we lived without her before; yet does she do, and we know that she does, in all things the

et miseram taetris se suffit odoribus ipsa 1175
 quam famulae longe fugitant furtimque cachinnant.
 at lacrimans exclusus amator limina saepe
 floribus et sertis operit postisque superbos
 unguis amaracino et foribus miser oscula figit;
 quem si, iam *ammissum*, venientem offenderit aura 1180
 una modo, causas abeundi quaerat honestas,
 et meditata diu cadat alte sumpta querella,
 stultitiaeque ibi se damnet, tribuisse quod illi
 plus videat quam mortali concedere par est.
 nec Veneres nostras hoc fallit; quo magis ipsae 1185
 omnia summo opere hos vitae poscaenia celant
 quos retinere volunt adstrictosque esse in amore,
 nequiquam, quoniam tu animo tamen omnia possis
 protrahere in lucem atque omnis inquirere risus
 et, si bello animos et non odiosa, vicissim 1190
 praetermittere *et* humanis concedere rebus.

Nec mulier semper ficto suspirat amore
 quae complexa viri corpus cum corpore iungit
 et tenet adsuctis umectans oscula labris.
 nam facit ex animo saepe et communia quaerens 1195
 gaudia sollicitat spatium decurrere amoris.

same as the ugly woman; and fumigates herself, poor wretch, with
 nauseous perfumes, her very maids running from her and giggling
 secretly. But the lover, when shut out, often in tears covers the thresh-
 hold with flowers and wreaths and anoints the haughty door-posts with
 oil of marjoram and imprints kisses, poor wretch, on the doors. When
 however he has been admitted, if on his approach but one single breath
 should come in his way, he would seek specious reasons for departing,
 and the long-conned deep-drawn complaint would fall to the ground;
 and then he would blame his folly, on seeing that he had attributed to
 her more than it is right to concede to a mortal. Nor is this unknown
 to our Venuses; wherefore all the more they themselves hide with the
 utmost pains all that goes on behind the scenes of life from those whom
 they wish to retain in the chains of love; but in vain, since you may yet
 draw forth from her mind into the light all these things and search into
 all her smiles; and if she is of a fair mind and not troublesome, overlook
 them in your turn and make allowance for human failings.

Nor does the woman sigh always with fictitious love, when she locks
 in her embrace and joins with her body the man's body and holds it,
 sucking his lips into her lips and drinking in his kisses. Often she does
 it from the heart, and seeking mutual joys courts him to run the complete

nec ratione alia volucres armenta feraeque
 et pecudes et equae maribus subsidere possent,
 si non, ipsa quod illorum subat ardet abundans
 natura et Venerem salientum laeta retractat. 1200
 nonne vides etiam quos mutua saepe voluptas
 vinxit, ut in vinclis communibus excrucientur?
 in triviis quam saepe canes, discedere aventis,
 1210 divorsi cupide summis ex viribu' tendunt,
 1204 quom interea validis Veneris compagibus haerent! 1205
 quod facerent numquam nisi mutua gaudia nossent
 quae iacere in fraudem possent vinctosque tenere.
 quare etiam atque etiam, ut dico, est communi' voluptas.
 Et commiscendo quom semine forte virili
 1209 femina vim vicit subita vi corripuitque, 1210
 tum similes matrum materno semine fiunt,
 ut patribus patrio. sed quos utriusque figurae
 esse vides, iuxtim miscentes vulta parentum,
 corpore de patrio et materno sanguine crescunt,
 semina cum Veneris stimulis excita per artus 1215
 obvia confluxit conspirans mutuus ardor,
 et neque utrum superavit eorum nec superatumst.

race of love. And in no other way could birds cattle wild-beasts sheep
 and mares submit to bear the males, except because the very exuberance
 of nature in the females is in heat and burns and joyously draws in the
 Venus of the covering males. See you not too how those whom mutual
 pleasure has chained are often tortured in their common chains? How
 often in the highways do dogs, desiring to separate, eagerly pull different
 ways with all their might, while all the time they are held fast in the
 strong fetters of Venus! This they would never do, unless they
 experienced mutual joys, strong enough to force them into the snare and
 hold them in its meshes. Wherefore again and again I repeat there is a
 common pleasure.

And when haply in mixing her seed with the man's the woman by
 sudden force has overpowered and seized for herself his force, then
 children are formed from the mothers' seed like to the mothers, as from
 the fathers' seed like to the fathers. But those whom you see with a
 share of both forms, blending equally the features of the parents, grow
 from the union of the father's body and the mother's blood, when the
 mutual ardour of desire working in concert has brought and clashed
 together the seeds roused throughout the frame by the goads of Venus;
 and neither of the two has gotten the mastery nor has been mastered.

fit quoque ut interdum similes existere avorum
 possint et referant proavorum saepe figuras
 propterea quia multa modis primordia multis 1220
 mixta suo celant in corpore saepe parentis,
 quae patribus patres tradunt ab stirpe profecta;
 inde Venus varia producit sorte figuras
 maiorumque refert voltus vocesque comasque.

1227 et muliebre oritur patrio de semine saeculum 1225
 maternoque mares existunt corpore creti;

1225 quandoquidem nilo magis haec *de* semine certo
 fiunt quam facies et corpora membraque nobis;
 semper enim partus duplici de semine constat,
 atque utri similest magis id quodcumque creatur, 1230
 eius habet plus parte aequa; quod cernere possis,
 sive virum suboles sive muliebris origo.

Nec divina satum genitalem numina cuiquam
 absterrent, pater a gnatis ne dulcibus umquam
 appelletur et ut sterili Venere exigit aevom; 1235
 quod plerumque putant et multo sanguine maesti
 conspergunt aras adolentque altaria donis,
 ut gravidas reddant uxores semine largo.
 nequiquam divom numen sortisque fatigant.

Sometimes too the children may spring up like their grandfathers and often resemble the forms of their grandfathers' fathers, because the parents often keep concealed in their bodies many first-beginnings mixed in many ways, which first proceeding from the original stock one father hands down to the next father; and then from these Venus produces forms after a manifold chance and repeats not only the features, but the voices and hair of forefathers. And the female sex equally springs from the father's seed and males go forth equally formed from the mother's body; since these distinctions no more proceed from the fixed seed of one or other parent than our faces and bodies and limbs: the birth is always formed out of the two seeds; and whichever parent that which is produced more resembles, of that parent it has more than an equal share; as you may equally observe, whether it is a male child or a female birth.

Nor do the divine powers debar anybody from the power of begetting, forbidding him ever to receive the name of father from sweet children and forcing him to pass his life in a barren wedlock; as men commonly fancy when in sorrow they drench the altars with much blood and pile the raised altars with offerings, to make their wives pregnant with abundant seed. In vain they weary the divinity of the

nam steriles nimium crasso sunt semine partim 1240
 et liquido praeter iustum tenuique vicissim.
 tenve locis quia non potis est adfigere adhaesum,
 liquitur extemplo et revocatum cedit abortu.
 crassius his porro quoniam concretius aequo
 mittitur, aut non tam prolixo provolat ictu 1245
 aut penetrare locos aequae nequit aut penetratum
 aegre admiscetur muliebri semine semen.
 nam multum harmoniae Veneris differre videntur.
 atque alias alii complent magis ex aliisque
 succipiunt aliae pondus magis inque gravescunt. 1250
 et multae steriles Hymenaeis ante fuerunt
 pluribus et nactae post sunt tamen unde pueros
 suscipere et partu possent ditescere dulci.
 et quibus ante domi fecundae saepe nequissent
 uxores parere, inventast illis quoque compar 1255
 natura, ut possent gnatis munire senectam.
 usque adeo magni refert, ut semina possint
 seminibus commisceri genitaliter apta,
 crassane convenient liquidis et liquida crassis.
 atque in eo refert quo victu vita colatur; 1260

gods and the sacred lots. They are barren sometimes from the too great thickness of the seed, sometimes from its undue fluidity and thinness: because the thin is unable to get a firm hold on the right spots, it at once passes away and is repelled and withdrawn abortively: since by others again a too thick seed is discharged in a state more solid than is suitable, it either does not fly forth with so prolonged a stroke or cannot equally pass into the proper spots or when it has passed in with difficulty mixes with the woman's seed. For well-assorted matches are found to be of great importance; and some males impregnate some females more readily than others, and other females conceive and become pregnant more readily from other males. And many women have hitherto been barren during several marriages and have yet in the end found mates from whom they could conceive children and be enriched with a sweet offspring. And often even for those, to whom hitherto wives however fruitful had been unable in their house to bear, has been found a compatible nature, enabling them to fortify their age with sons. Of such great importance is it, in order that seeds may agree and blend with seeds in a way to promote birth, whether the thick comes into contact with the fluid and the fluid with the thick. And on this point it matters much on what diet life is supported; for by some foods seed

namque aliis rebus concrescunt semina membris
 atque aliis extendantur tabentque vicissim.
 et quibus ipsa modis tractetur blanda voluptas,
 id quoque permagni refert; nam more ferarum
 quadrupedumque magis ritu plerumque putantur 1265
 concipere uxores, quia sic loca sumere possunt,
 pectoribus positis, sublatis semina lumbis.
 nec molles opu' sunt motus uxoribus hilum.
 nam mulier prohibet se concipere atque repugnat,
 clunibus ipsa viri Venerem si laeta retractat 1270
 atque exossato ciet omni pectore fluctus;
 eicit enim sulcum recta regione viaque
 vomeris atque locis avertit seminis ictum.
 idque sua causa consuerunt scorta moveri,
 ne complerentur crebro gravidaeque iacerent 1275
 et simul ipsa viris Venus ut concinnior esset;
 coniugibus quod nil nostris opus esse videtur.
 Nec divinitus interdum Venerisque sagittis
 deteriore fit ut forma muliercula ametur.
 nam facit ipsa suis interdum femina factis 1280
 morigerisque modis et munde corpore culto,
 ut facile insuescat *te* secum degere vitam.
 quod superest, consuetudo concinnat amorem;

is thickened in the limbs, and by others again is thinned and wasted. And in what modes the intercourse goes on, is likewise of very great moment; for women are commonly thought to conceive more readily after the manner of wild-beasts and quadrupeds, because the seeds in this way can find the proper spots, in consequence of the position of the body. Nor have wives the least use for effeminate motions: a woman hinders and stands in the way of her own conceiving, when thus she acts; for she drives the furrow out of the direct course and path of the share and turns away from the proper spots the stroke of the seed. And thus for their own ends harlots are wont to move, in order not to conceive and lie in child-bed frequently, and at the same time to render Venus more attractive to men. This our wives would seem to have no need for.

Sometimes too by no divine grace and arrows of Venus a sorry woman of inferior beauty comes to be loved; for the woman sometimes by her own acts and accommodating manners and by elegant neatness of person readily habituates you to pass your life with her. Moreover custom renders love attractive; for that which is struck by oft-repeated

nam leviter quamvis quod crebro tunditur ictu,
vincitur in longo spatio tamen atque labascit. 1285
nonne vides etiam guttas in saxa cadentis
umoris longo in spatio pertundere saxa?

blows however lightly, yet after long course of time is overpowered and gives way. See you not too that drops of water falling on rocks after long course of time scoop a hole through these rocks?

T. LUCRETI CARI
DE RERUM NATURA

LIBER QUINTUS

Quis potis est dignum pollenti pectore carmen
condere pro rerum maiestate hisque repertis?
quisve valet verbis tantum qui fingere laudes
pro meritis eius possit qui talia nobis
pectore parta suo quaesitaque praemia liquit? 5
nemo, ut opinor, erit mortali corpore cretus.
nām si, ūt ipsa petit maiestas cognita rerum,
dicendum est, deus ille fuit, deus, inclyte Memmi,
qui princeps vitae rationem invenit eam quae
nunc appellatur sapientia, quique per artem 10
fluctibus e tantis vitam tantisque tenebris
in tam tranquillo et tam clara luce locavit.
confer enim divina aliorum antiqua reperta.
namque Ceres fertur fruges Liberque liquoris
vitigeni laticem mortalibus instituisse; 15
cum tamen his posset sine rebus vita manere,
ut fama est aliquas etiam nunc vivere gentis.

Who is able with powerful genius to frame a poem worthy of the grandeur of the things and these discoveries? or who is so great a master of words as to be able to devise praises equal to his merits who left to us such prizes won and earned by his own genius? None methinks who is formed of mortal body. For if we must speak as the acknowledged grandeur of the things itself demands, a god he was, a god, most noble Memmius, who first found out that plan of life which is now termed wisdom, and who by trained skill rescued life from such great billows and such thick darkness and moored it in so perfect a calm and in so brilliant a light. Compare the godlike discoveries of others in old times: Ceres is famed to have pointed out to mortals corn, and Liber the vine-born juice of the grape; though life might well have subsisted without these things, as we are told some nations even now live without

at bene non poterat sine puro pectore vivi;
 quo magis hic merito nobis deus esse videtur,
 ex quo nunc etiam per magnas didita gentis 20
 dulcia permulcent animos solacia vitae.
 Herculis antistare autem si facta putabis,
 longius a vera multo ratione ferere.
 quid Nemeaeus enim nobis nunc magnus hiatus
 ille leonis obsesset et horrens Arcadius sus? 25
 denique quid Cretae taurus Lernaëaque pestis
 hydra venenatis posset vallata colubris?
 quidve tripectora tergemini vis Geryonai

 30 tanto opere officerent nobis Stymphala colentes
 29 et Diomedis equi spirantes naribus ignem 30
 Thracis Bistoniasque plagas atque Ismara propter?
 aureaque Hesperidum servans fulgentia mala,
 asper, acerba tuens, immani corpore serpens
 arboris amplexus stirpem quid denique obsesset
 propter Atlanteum litus pelageque severa, 35
 quo neque noster adit quisquam nec barbarus audet?
 cetera de genere hoc quae sunt portenta perempta,
 sei non victa forent, quid tandem viva nocerent?
 nil, ut opinor: ita ad satiatem terra ferarum

them. But a happy life was not possible without a clean breast; where-
 fore with more reason this man is deemed by us a god, from whom come
 these sweet solaces of existence which even now are distributed over
 great nations and gently soothe men's minds. Then if you shall suppose
 that the deeds of Hercules surpass his, you will be carried still farther
 away from true reason. For what would yon great gaping maw of
 Nemean lion now harm us and the bristled Arcadian boar? ay or what
 could the bull of Crete do and the hydra plague of Lerna, fenced round
 with its envenomed snakes? or how could the triple-breasted might of
 threefold Geryon, [how could the birds with brazen arrowy feathers] that
 dwelt in the Stymphalian swamps do us such mighty injury, and the
 horses of Thracian Diomedes breathing fire from their nostrils along the
 Bistonian borders and Ismara? and the serpent which guards the bright
 golden apples of the Hesperides, fierce, dangerous of aspect, girding the
 tree's stem with his enormous body, what harm pray could he do us beside
 the Atlantic shore and melancholy main, which none of us goes near
 and no barbarian ventures nigh? And all other monsters of the kind
 which have been destroyed, if they had not been vanquished, what harm
 could they do, I ask, if now alive? None methinks: the earth even

nunc etiam scātīt et trepido terrore repleta est 40
 per nemora ac montes magnos silvasque profundas;
 quae loca vitandi plerumque est nostra potestas.
 at nisi purgatumst pectus, quae proelia nobis
 atque pericula tumst ingratis insinuandum!
 quantae tum scindunt hominem cuppedinis acres 45
 sollicitum curae quantique perinde timores!
 quidve superbia spurcitia ac petulantia? quantas
 efficiunt clades! quid luxus desidiaequē?
 haec igitur qui cuncta subegerit ex animoque
 expulerit dictis, non armis, nonne decebit 50
 hunc hominem numero divom dignarier esse?
 cum bene praesertim multa ac divinitus ipsis
 immortalibu' de divis dare dicta suērit
 atque omnem rerum naturam pandere dictis.
 Cuius ego ingressus vestigia dum rationes 55
 persequor ac doceo dictis, quo quaeque creata
 foedere sint, in eā quam sit durare necessum
 nec validas valeant aevi rescindere leges,
 quo genere in primis animi natura reperta est
 nativo primum consistere corpore creta 60
 nec posse incolumis magnum durare per aevom,

now so abounds to repletion in wild beasts and is filled with troublous
 terrour throughout woods and great mountains and deep forests; places
 which we have it for the most part in our own power to shun. But
 unless the breast is cleared, what battles and dangers must then find
 their way into us in our own despite! what poignant cares inspired by
 lust then rend the distressful man, and then also what mighty fears!
 and pride, filthy lust and wantonness? what disasters they occasion! and
 luxury and all sorts of sloth? He therefore who shall have subdued all
 these and banished them from the mind by words, not arms, shall he not
 have a just title to be ranked among the gods? and all the more so that
 he was wont to deliver many precepts in beautiful and godlike phrase
 about the immortal gods themselves and to open up by his writings all
 the nature of things.

While walking in his footsteps I follow out his reasonings and teach
 by my verses, by what law all things are made, what necessity there is
 then for them to continue in that law, and how impotent they are to
 annul the binding statutes of time: foremost in which class of things
 the nature of the mind has been proved to be formed of a body that had
 birth and to be unable to endure unscathed through great time, mere idols

sed simulacra solere in somnis fallere mentem,
 cernere cum videamur eum quem vita reliquit,
 quod superest, nunc huc rationis detulit ordo,
 ut mihi mortali consistere corpore mundum 65
 nativomque simul ratio reddunda sit esse;
 et quibus ille modis congressus materiai
 fundarit terram caelum mare sidera solem
 lunaique globum; tum quae tellure animantes
 extiterint, et quae nullo sint tempore natae; 70
 quove modo genus humanum variante loquella
 coeperit inter se vesci per nomina rerum;
 et quibus ille modis divom metus insinuarit
 pectora, terrarum qui in orbi sancta tuetur
 fana lacus lucos aras simulacraque divom. 75
 praeterea solis cursus lunaeque meatus
 expediam qua vi flectat natura gubernans;
 ne forte haec inter caelum terramque reamur
 libera sponte sua cursus lustrare perennis
 morigera ad fruges augendas atque animantis, 80
 neve aliqua divom volvi ratione putemus.
 nam bene qui didicere deos securum agere aevom,
 si tamen interea mirantur qua ratione
 quaeque geri possint, praesertim rebus in illis

being wont to mock the mind in sleep, when we seem to see him whom
 life has abandoned: to continue, the order of my design has now brought
 me to this point, where I must proceed to shew that the world is formed
 of a mortal body and at the same time had birth; to shew too in what
 ways that union of matter founded earth heaven sea stars sun and the
 ball of the moon; also what living creatures sprang out of the earth, as
 well as those which never at any time were born; in what way too man-
 kind began to use with one another varied speech by the names con-
 ferred on things; and also in what ways yon fear of the gods gained an
 entry into men's breasts, and now throughout the world maintains as
 holy fanes lakes groves altars and idols of the gods. Furthermore I
 shall make clear by what force piloting nature guides the courses of the
 sun and the wanderings of the moon; lest haply we imagine that these
 of their own free will between heaven and earth traverse their everlast-
 ing orbits, graciously furthering the increase of crops and living creatures,
 or think they roll on by any forethought of the gods. For they who
 have been rightly taught that the gods lead a life without care, if
 nevertheless they wonder by what plan all things can be carried on,
 above all in regard to those things which are seen overhead in the

quae supera caput aetheriis cernuntur in oris, 85
 rursus in antiquas referuntur religiones
 et dominos acris adsciscunt, omnia posse
 quos miseri credunt, ignari quid queat esse,
 quid nequeat, finita potestas denique cuique
 quanam sit ratione atque alte terminus haerens. 90

Quod superest, ne te in promissis plura moremur,
 principio maria ac terras caelumque tuere;
 quorum naturam triplicem, tria corpora, Memmi,
 tris species tam dissimilis, tria talia texta,
 una dies dabit exitio, multosque per annos 95
 sustentata ruet moles et machina mundi.
 nec me animi fallit quam res nova miraue menti
 accidat exitium caeli terraeque futurum,
 et quam difficile id mihi sit pervincere dictis;
 ut fit ubi insolitam rem adportes auribus ante 100
 nec tamen hanc possis oculorum subdere visu
 nec iacere indu manus, via qua munita fidei
 proxima fert humanum in pectus templaue mentis.
 sed tamen effabor. dictis dabit ipsa fidem res
 forsitan et graviter terrarum motibus ortis 105
 omnia conquassari in parvo tempore cernes.
 quod procul a nobis flectat fortuna gubernans,

ethereal borders, are borne back again into their old religious scruples and take unto themselves hard taskmasters, whom they poor wretches believe to be almighty, not knowing what can, what cannot be, in short by what system each thing has its powers defined, its deep-set boundary mark.

Well then not to detain you any longer by mere promises, look before all on seas and lands and heaven: their threefold nature, their three bodies, Memmius, three forms so unlike, three such wondrous textures a single day shall give over to destruction; and the mass and fabric of the world upheld for many years shall tumble to ruin. Nor can I fail to perceive with what a novel and strange effect it falls upon the mind, this destruction of heaven and earth that is to be, and how hard it is for me to produce a full conviction of it by words; as is the case when you bring to the ears a thing hitherto unexampled, and yet you cannot submit it to the eyesight nor put it into the hands; through which the straightest highway of belief leads into the human breast and quarters of the mind. But yet I will speak out: it well may be that the reality itself will bring credit to my words and that you will see earthquakes arise and all things grievously shattered to pieces in a short time. But this may pilot fortune guide far away from us, and may reason rather

et ratio potius quam res persuadeat ipsa
succidere horrissono posse omnia victa fragore.

[Qua prius adgrediar quam de re fundere fata 110
sanctius et multo certa ratione magis quam
Pythia quae tripode a Phoebi lauroque profatur,
multa tibi expediam doctis solacia dictis;
religione refrenatus ne forte rearis
terrās et solem et caelum, mare sidera lunam, 115
corpore divino debere aeterna manere,
proptereaue putes ritu par esse Gigantum
pendere eos poenas inmani pro scelere omnis
qui ratione sua disturbent moenia mundi
praeclarumque velint caeli restinguere solem 120
immortalia mortali sermone notantes;
quae procul usque adeo divino a numine distent,
inque deum numero quae sint indigna videri,
notitiam potius praebere ut posse putentur
quid sit vitali motu sensuque remotum. 125
quippe etenim non est, cum quovis corpore ut esse
posse animi natura putetur consiliumque;
sicut in aethere non arbor, non aequore salso
nubes esse queunt neque pisces vivere in arvis
nec cruor in lignis neque saxis sucus inesse. 130]

than the reality convince that all things may be overpowered and tumble in with a frightful crash.

But before I shall begin on this question to pour forth decrees of fate with more sanctity and much more certainty than the Pythia who speaks out from the tripod and laurel of Phoebus, I will clearly set forth many comforting topics in learned language; lest held in the yoke of religion you haply suppose that earth and sun and heaven, sea stars moon must last for ever with divine body; and therefore think it right that they after the fashion of the giants should all suffer punishment for their monstrous guilt, who by their reasoning displace the walls of the world and seek to quench the glorious sun of heaven, branding immortal things in mortal speech; though in truth these things are so far from possessing divinity and are so unworthy of being reckoned in the number of gods, that they may be thought to afford a notable instance of what is quite without vital motion and sense. For it is quite impossible to suppose that the nature and judgment of the mind can exist with any body whatever; even as a tree cannot exist in the ether nor clouds in the salt sea nor can fishes live in the fields nor blood exist in woods nor

certum ac dispositumst ubi quicquid crescat et insit.
 sic animi natura nequit sine corpore oriri
 sola neque a nervis et sanguine longiter esse.
 quod si (posset enim multo prius) ipsa animi vis
 in capite aut umeris aut imis calcibus esse 135
 posset et innasci quavis in parte, soleret
 tandem in eodem homine atque in eodem vase manere.
 quod quoniam nostro quoque constat corpore certum
 dispositumque videtur ubi esse et crescere possit
 seorsum anima atque animus, tanto magis infitiandum 140
 totum posse extra corpus formamque animalem
 putribus in glebis terrarum aut solis in igni
 aut in aqua durare aut altis aetheris oris.
 haud igitur constant divino praedita sensu,
 quandoquidem nequeunt vitaliter esse animata. 145

Illud item non est ut possis credere, sedes
 esse deum sanctas in mundi partibus ullis.
 tenuis enim natura deum longeque remota
 sensibus ab nostris animi vix mente videtur;
 quae quoniam manuum tactum suffugit et ictum, 150
 tactile nil nobis quod sit contingere debet.
 tangere enim non quit quod tangi non licet ipsum.

sap in stones. Where each thing can grow and abide is fixed and ordained. Thus the nature of the mind cannot come into being alone without the body nor exist far away from the sinews and blood. But if (for this would be much more likely to happen than that) the force itself of the mind might be in the head or shoulders or heels or might be born in any other part of the body, it would after all be wont to abide in one and the same man or vessel. But since in our body even it is fixed and seen to be ordained where the soul and the mind can severally be and grow, it must still more strenuously be denied that it can abide out of the body and the living form altogether in crumbling clods of earth or in the fire of the sun or in water or in the high borders of ether. These things therefore are not possessed of divine sense, since they cannot be quickened with the vital feeling.

This too you may not possibly believe, that the holy seats of the gods exist in any parts of the world: the fine nature of the gods far withdrawn from our senses is hardly seen by the thought of the mind; and since it has ever eluded the touch and stroke of the hands, it must touch nothing which is tangible for us; for that cannot touch which does not admit of being touched in turn. And therefore their seats as

quare etiam sedes quoque nostris sedibus esse
 dissimiles debent, tenues pro corpore eorum;
 quae tibi posterius largo sermone probabo. 155
 dicere porro hominum causa voluisse parare
 praeclaram mundi naturam proptereaue
 adlaudabile opus divom laudare decere
 aeternumque putare atque immortale futurum
 nec fas esse, deum quod sit ratione vetusta 160
 gentibus humanis fundatum perpetuo aevo,
 sollicitare suis ulla vi ex sedibus umquam
 nec verbis vexare et ab imo evertere summa,
 cetera de genere hoc adfingere et addere, Memmi,
 desiperest. quid enim immortalibus atque beatis 165
 gratia nostra queat largirier emolumentum,
 ut nostra quicquam causa gerere adgrediantur?
 quidve novi potuit tanto post ante quietos
 inlicere ut cuperent vitam mutare priorem?
 175 at, credo, in tenebris vita ac maerore iacebat, 170
 donec diluxit rerum genitalis origo.
 170 nam gaudere novis rebus debere videtur
 cui veteres obsunt; sed cui nil accidit aegri
 tempore in anteacto, cum pulchre degeret aevom,

well must be unlike our seats, and fine in proportion to their bodies. All which I will prove to you later in copious argument. To say again that for the sake of men they have willed to set in order the glorious nature of the world and therefore it is meet to praise the work of the gods calling as it does for all praise, and to believe that it will be eternal and immortal, and that it is an unholy thing ever to shake by any force from its fixed seats that which by the forethought of the gods in ancient days has been established on everlasting foundations for mankind, or to assail it by speech and utterly overturn it from top to bottom; and to invent and add other figments of the kind, Memmius, is all sheer folly. For what advantage can our gratitude bestow on immortal and blessed beings, that for our sakes they should take in hand to administer aught? And what novel incident could have induced them hitherto at rest so long after to desire to change their former life? But then life it would seem lay grovelling in darkness and sorrow, until the first dawn of the birthtime of things; for it seems natural he should rejoice in a new state of things, whom old things annoy; but for him whom no ill has befallen in time gone by, when he passed a pleasant existence, what could have kindled in such a one a love of

- quid potuit novitatis amorem accendere tali? 175
 174 quidve mali fuerat nobis non esse creatis?
 177 natus enim debet quicumque est velle manere
 in vita, donec retinebit blanda voluptas.
 qui numquam vero vitae gustavit amorem
 nec fuit in numero, quid obest non esse creatum? 180
 exemplum porro gignundis rebus et ipsa
 notities divis hominum unde est insita primum,
 quid vellent facere ut scirent animoque viderent,
 quove modost umquam vis cognita principiorum
 quidque inter sese permutato ordine possent, 185
 si non ipsa dedit specimen natura creandi?
 namque ita multa modis multis primordia rerum
 ex infinito iam tempore percita plagis
 ponderibusque suis consuerunt concita ferri
 omnimodisque coire atque omnia pertemptare, 190
 quaecumque inter se possent congressa creare,
 ut non sit mirum si in talis disposituras
 deciderunt quoque et in talis venere meatus,
 qualibus haec rerum geritur nunc summa novando.
 Quod si iam rerum ignorem primordia quae sint, 195
 hoc tamen ex ipsis caeli rationibus ausim
 confirmare aliisque ex rebus reddere multis,

change? or what evil had it been for us never to have been born? whoever has been born must want to continue in life, so long as fond pleasure shall keep him; but for him who has never tasted the love, never been on the lists, of life, what harm never to have been born? Whence again was first implanted in the gods a pattern for begetting things in general as well as the preconception of what men are, so that they knew and saw in mind what they wanted to make; and in what way was the power of first-beginnings ever ascertained, and what they could effect by a change in their mutual arrangements, unless nature herself gave the model for making things? For in suchwise the first-beginnings of things many in number in many ways impelled by blows for infinite ages back and kept in motion by their own weights have been wont to be carried along and to unite in all manner of ways and thoroughly test every kind of production possible by their mutual combinations; that it is not strange if they have also fallen into arrangements and have come into courses like to those out of which this sum of things is now carried on by constant renewing.

But if I did not know what first-beginnings of things are, yet this judging by the very arrangements of heaven I would venture to affirm,

nequaquam nobis divinitus esse paratam
 naturam rerum; tanta stat praedita culpa.
 principio quantum caeli tegit impetus ingens, 200
 inde avidei partem montes silvaeque ferarum
 possedere, tenent rupes vastaeque paludes
 et mare quod late terrarum distinet oras. *
 inde duas porro prope partis fervidus ardor
 adsiduusque geli casus mortalibus aufert. 205
 quod superest arvi, tamen id natura sua vi
 sentibus obducat, ni vis humana resistat
 vitae causa valido consueta bidenti
 ingemere et terram pressis proscindere aratris.
 si non fecundas vertentes vomere glebas 210
 terraique solum subigentes cimus ad ortus,
 sponte sua nequeant liquidas existere in auras,
 et tamen interdum magno quaesita labore
 cum iam per terras frondent atque omnia florent,
 aut nimiis torret fervoribus aetherius sol 215
 aut subiti peremunt imbris gelidaeque pruinae,
 flabraque ventorum violento turbine vexant.
 praeterea genus horrifera natura ferarum
 humanae genti infestum terraque marique

and led by many other facts to maintain, that the nature of things has by no means been made for us by divine power: so great are the defects with which it is encumbered. In the first place of all the space which the vast reach of heaven covers, a portion greedy mountains and forests of wild-beasts have occupied, rocks and wasteful pools take up and the sea which holds wide apart the coasts of different lands. Next of nearly two thirds burning heat and the constant fall of frost rob mortals. What is left for tillage, even that nature by its power would overrun with thorns, unless the force of man made head against it, accustomed for the sake of a livelihood to groan beneath the strong hoe and to cut through the earth by pressing down the plough. Unless by turning up the fruitful clods with the share and labouring the soil of the earth we stimulate things to rise, they could not spontaneously come up into the clear air; and even then sometimes when things earned with great toil now put forth their leaves over the earth and are all in blossom, either the ethereal sun burns them up with excessive heats or sudden showers and cold frosts cut them off, and the blasts of the winds waste them by a furious hurricane. Again why does nature give food and increase to the frightful race of wild-beasts dangerous to man-

cur alit atque auget? cur anni tempora morbos 220
 adportant? quare mors inmatura vagatur?
 tum porro puer, ut saevis proiectus ab undis
 navita nudus humi iacet, infans, indigus omni
 vitali auxilio, cum primum in luminis oras
 nixibus ex alvo matris natura profudit, 225
 vagituque locum lugubri complet, ut aecumst
 cui tantum in vita restet transire malorum.
 at variae crescunt pecudes armenta feraeque
 nec crepitacillis opus est nec cuiquam adhibendast
 almae nutricis blanda atque infracta loquella 230
 nec varias quaerunt vestes pro tempore caeli,
 denique non armis opus est, non moenibus altis,
 qui sua tutentur, quando omnibus omnia large
 tellus ipsa parit naturaque daedala rerum.]
 Principio quoniam terrai corpus et umor 235
 aurarumque leves animae calidique vapores,
 e quibus haec rerum consistere summa videtur,
 omnia nativo ac mortali corpore constant,
 debet eodem omnis mundi natura putari.
 quippe etenim quorum partis et membra videmus 240
 corpore nativo ac mortalibus esse figuris,

kind both by sea and land? Why do the seasons of the year bring diseases in their train? Why stalks abroad untimely death? Then too the baby, like to a sailor cast away by the cruel waves, lies naked on the ground, speechless, wanting every furtherance of life, when nature first by the throes of birth has shed him forth from his mother's womb into the borders of light: he fills the room with a rueful wailing, as well he may whose destiny it is to go through in life so many ills. But the different flocks herds and wild-beasts grow up; they want no rattles; to none of them need be addressed the fond broken accents of the fostering nurse; they ask not different dresses according to the season; no nor do they want arms or lofty walls, whereby to protect their own, the earth itself and nature manifold in her works producing in plenty all things for all.

First of all, since the body of the earth and water and the light breath of air and burning heats, out of which this sum of things is seen to be formed, do all consist of a body that had a birth and is mortal, the whole nature of the world must be accounted of a like body. For those things whose parts and members we see to be of a body that had a birth and of forms that are mortal, we perceive to be likewise without

haec eadem ferme mortalia cernimus esse
 et nativa simul. quapropter maxima mundi
 cum videam membra ac partis consumpta regigni,
 scire licet caeli quoque item terraeque fuisse 245
 principiale aliquod tempus clademque futuram.

Illud in his rebus ne corripuisse rearis
 me mihi, quod terram atque ignem mortalia sumpsisti
 esse neque umorem dubitavi aurasque perire
 atque eadem gigni rursusque augescere dixi, 250
 principio pars terrae nonnulla, perusta
 solibus adsiduis, multa pulsata pedum vi,
 pulveris exhalat nebulam nubesque volantis
 quas validi toto dispergunt aere venti.
 pars etiam glebarum ad diluvium revocatur 255
 imbribus et ripas radentia flumina rodunt.
 praeterea pro parte sua, quodcumque alid auget,
 redditur; et quoniam dubio procul esse videtur
 omniparens eadem rerum commune sepulcrum,
 ergo terra tibi libatur et aucta recrescit. 260

Quod superest, umore novo mare flumina fontes
 semper abundare et latices manare perennis
 nil opus est verbis: magnus decursus aquarum

exception mortal, and at the same time to have had a birth. Since therefore I see that the chiefest members and parts of the world are destroyed and begotten anew, I may be sure that for heaven and earth as well there has been a time of beginning and there will be a time of destruction.

And herein that you may not think that I have unfairly seized on this point for myself, because I have assumed that earth and fire are mortal and have not doubted that water and air perish, and have said that these are likewise begotten and grow afresh, mark the proofs: first of all some portion of the ~~air~~, burnt up by constant suns, trampled by a multitude of feet, sends forth a cloud and flying eddies of dust, which the strong winds disperse over the whole air. Part too of the soil is again put under water by rains, and rivers graze against and eat into the banks. Again whatever increases something else, is in its turn replenished; and since beyond a doubt earth the universal mother is found at the same time to be the general tomb of things, therefore you see she is lessened and increases and grows again.

Furthermore, that sea rivers fountains always stream over with new moisture and that waters well up without ceasing, it needs no words to prove: the great flow of waters from all sides clearly shews it. But

undique declarat. sed primum quicquid aquai
 tollitur in summaque fit ut nil umor abundet, 265
 partim quod validi verrentes aequora venti
 diminuunt radiisque retexens aetherius sol,
 partim quod sup̄ter per terras diditur omnis;
 percolatur enim virus retroque remanat
 materies umoris et ad caput amnibus omnis 270
 convenit, inde super terras fluit agmine dulci
 qua via secta semel liquido pede detulit undas.

Aera nunc igitur dicam qui corpore toto
 innumerabiliter privas mutatur in horas.
 semper enim, quodcumque fluit de rebus, id omne 275
 aeris in magnum fertur mare; qui nisi contra
 corpora retribuat rebus recreetque fluentis,
 omnia iam resoluta forent et in aera versa.
 haut igitur cessat gigni de rebus et in res
 reccidere, adsidue quoniam fluere omnia constat. 280

Largus item liquidi fons luminis, aetherius sol,
 inrigat adsidue caelum candore recenti
 sup̄peditatque novo confestim lumine lumen.
 nam primum quicquid fulgoris disperit ei,
 quocumque accidit. id licet hinc cognoscere possis, 285

then the water on the surface is always taken off, and thus it is that on the whole there is no overflow, partly because the seas are lessened by the strong winds sweeping over them and by the ethereal sun decomposing them with his rays; partly because the water is diffused below the surface over all lands; for the salt is strained off and the matter of liquid streams back again to the source and all meets together at the river-heads, and then flows over the lands in a fresh current, where a channel once scooped out has carried down the waters with liquid foot.

And next I will speak of the air which is changed over its whole body every hour in countless ways. For whatever ebbs from things, is all borne always into the great sea of air; and unless it in return were to give back bodies to things and to recruit them as they ebb, all things ere now would have been dissolved and changed into air. It therefore ceases not to be begotten from things and to go back again into things, since it is a fact that all things constantly ebb.

Likewise the abundant source of clear light, the ethereal sun, constantly floods heaven with fresh brightness and replaces on the instant light by new light; for every previous emission of brightness is quite lost, wherever it falls. This you may know from the following examples:

quod simul ac primum nubes succedere soli
 coepere et radios inter quasi rumpere lucis,
 extemplo inferior pars horum disperit omnis
 terraque inumbratur qua nimbi cumque feruntur;
 ut noscas splendore novo res semper egere 290
 et primum iactum fulgoris quemque perire
 nec ratione alia res posse in sole videri,
 perpetuo ni suppeditet lucis caput ipsum.
 quin etiam nocturna tibi, terrestria quae sunt,
 lumina, pendentes lychni claraeque coruscis 295
 fulguribus pingues multa caligine taedae
 consimili properant ratione, ardore ministro,
 suppeditare novom lumen, tremere ignibus instant,
 instant, nec loca lux inter quasi rupta relinquit:
 usque adeo properanter ab omnibus ignibus ei 300
 exitium celeri celatur origine flammae.
 sic igitur solem lunam stellasque putandumst
 ex alio atque alio lucem iactare subortu
 et primum quicquid flammaram perdere semper;
 inviolabilia haec ne credas forte vigere. 305

Denique non lapides quoque vinci cernis ab aevo,
 non altas turris ruere et putrescere saxa,
 non delubra deum simulacraque fessa fatisci,

as soon as ever clouds begin to pass below the sun and to break off so to say the rays of light, forthwith their lower part is wholly lost, and the earth is overshadowed wherever the clouds pass over; so that you may know that things constantly require new irradiation and that all the preceding emissions of light are lost, and in no other way can things be seen in the sun, unless the fountain head of light itself send a supply. Moreover, you see, nightly lights which belong to earth, such as hanging lamps and torches bright with darting flames, hasten in like fashion amid great darkness with ministering heat to supply new light; are eager to bicker with fires, eager I say; nor is the light ever broken off nor does it quit the spots illuminated: with such suddenness from all the fires is its destruction concealed by the swift birth of flame. In the same way then we must believe that sun moon and stars emit light from fresh and ever fresh supplies rising up, and always lose every previous discharge of flames; that you may not haply believe that these flourish indestructible.

Again see you not that even stones are conquered by time, that high towers fall and rocks moulder away, that shrines and idols of gods are worn out with decay, and that the holy divinity cannot prolong the

nec sanctum numen fati protollere finis
 posse neque adversus naturae foedera niti? 310
 denique non monimenta virum dilapsa videmus,
 aeraque proporro solidumque senescere *ferrum, // quae res a proporo*
 non ruere avolsos silices a montibus altis *sibi sen-*
 nec validas aevi vires perferre patique *amper*
 finiti? neque enim caderent avolsa repente, *sa- ac- creda-*
 ex infinito quac tempore pertolerassent 315
 omnia tormenta aetatis, privata fragore.

Denique iam tuere hoc, circum-supraque quod omnem
 continet amplexu terram: si procreat ex se
 omnia, quod quidam memorant, recipitque perempta, 320
 totum nativum mortali corpore constat.
 nam quodcumque alias ex se res auget alitque,
 deminui debet, recreari, cum recipit res.

Praeterea si nulla fuit genitalis origo
 terrarum et caeli semperque aeterna fuere, 325
 cur supera bellum Thebanum et funera Troiae
 non alias alii quoque res cecinere poetae?
 quo tot facta virum totiens cecidere neque usquam
 aeternis famae monimentis insita florent?
 verum, ut opinor, habet novitatem summa recensque 330
 naturast mundi neque pridem exordia cepit.

bounds of fate or struggle against the fixed laws of nature? Then too see we not the monuments of men fall to ruin, and furthermore brass and solid iron grow old? basalt-rocks tumble down riven away from high mountains and unable to endure and suffer the strong might of finite age? surely they would never fall suddenly riven away, if for infinite time past they had held out against all the batteries of age without a crash.

Again gaze on this, which about and above holds in its embrace all the earth: if it begets all things out of itself, as some say, and takes them back when they are destroyed, then the whole of it has had a birth and is of a mortal body; for whatever gives increase and food out of itself to other things, must be lessened; and must be replenished, when it takes things back.

Again if there was no birth-time of earth and heaven and they have been from everlasting, why before the Theban war and the destruction of Troy have not other poets as well sung other themes? whither have so many deeds of men so often passed away and nowhere live embodied in lasting records of fame? The truth methinks is that the sum has but a recent date and the nature of the world is new and has but lately had

quare etiam quaedam nunc artes expoliuntur,
 nunc etiam augescunt; nunc addita navigiis sunt
 multa, modo organici melicos peperere sonores.
 denique natura haec rerum ratioque repertast 335
 nuper, et hanc primus cum primis ipse repertus
 nunc ego sum in patrias qui possim vertere voces.
 quod si forte fuisse antehac eadem omnia credis,
 sed periisse hominum torrenti saecula vapore,
 aut cecidisse urbis magno vexamine mundi, 340
 aut ex imbribus adsiduis exisse rapaces
 per terras amnes *atque* oppida cooperuisse,
 tanto quique magis victus fateare necessest
 exitium quoque terrarum caelique futurum.
 nam cum res tantis morbis tantisque periclis 345
 temptarentur, ibi si tristior incubuisset
 causa, darent late cladem magnasque ruinas.
 nec ratione alia mortales esse videmur,
 inter nos nisi quod morbis aegrescimus isdem
 atque illi quos a vita natura removit. 350
 Praeterea quaecumque manent aeterna necessust
 aut, quia sunt solido cum corpore, respuere ictus
 nec penetrare pati sibi quicquam quod queat artas

its commencement. Wherefore even now some arts are receiving their last polish, some are even in course of growth; just now many improvements have been made in ships; only yesterday musicians have given birth to tuneful melodies; then too this nature and system of things has been discovered lately; and I the very first of all have only now been found able to transfer it into native words. But if haply you believe that before this all things have existed just the same, but that the generations of men have perished by burning heat, or that cities have fallen by some great concussion of the world, or that after constant rains devouring rivers have gone forth over the earth and have whelmed towns, so much the more you must yield and admit that there will be entire destruction too of earth and heaven; for when things were tried by so great distempers and so great dangers, at that time had a more disastrous cause pressed upon them, they would far and wide have gone to destruction and mighty ruin. And in no other way are we proved to be mortal's, except because we all alike in turn fall sick of the same diseases which those had whom nature has withdrawn from life.

Again whatever things last for ever, must either, because they are of solid body, repel strokes and not suffer aught to pass into them,

dissociare intus partis, ut materiali
 corpora sunt quorum naturam ostendimus ante, 355
 aut ideo durare aetatem posse per omnem,
 plagarum quia sunt expertia, sicut inane est
 quod manet intactum neque ab ictu fungitur hilum,
 aut etiam quia nulla loci fit copia circum,
 quo quasi res possint discedere dissoluique, 360
 sicut summarum summa est aeterna neque extra
 qui locus est quo dissiliant neque corpora sunt quae
 possint incidere et valida dissolvere plaga.
 at neque, uti docui, solido cum corpore mundi
 naturast, quoniam admixtumst in rebus inane, 365
 nec tamen est ut inane, neque autem corpora desunt,
 ex infinito quae possint forte coorta
 corruere hanc rerum violento turbine summam
 aut aliam quamvis cladem inportare pericli,
 nec porro natura loci spatiumque profundi 370
 deficit, expargi quo possint moenia mundi,
 aut alia quavis possunt vi pulsa perire.
 haut igitur leti praeclusa est ianua caelo
 nec soli terraeque neque altis aequoris undis,
 sed patet immani et vasto respectat hiatu. 375
 quare etiam nativa necessumst confiteare

sufficient to disunite the closely massed parts within: such are the bodies of matter whose nature we have shewn before: or they must be able to endure through all time for this reason, because they are exempt from blows, as void is which remains untouched and suffers not a jot from any stroke; or else because there is no extent of room around, into which things so to say may depart and be broken up: in this way the sum of sums is eternal and there is no place outside into which things may spring asunder, nor are there any bodies which can fall upon them and dissolve them by a powerful blow. But the nature of the world, as I have shewn, is neither of solid body, since void is mixed up in all things, nor is it again like void, no nor is there lack of bodies that may haply rise up in mass out of the infinite and overthrow this sum of things with furious tornado or bring upon them some other perilous disaster; nor further is the nature of room and the space of deep void wanting, into which the walls of the world may be scattered abroad; or they may be assailed and perish by some other force. Therefore the gate of death is not closed against heaven or sun or earth or deep waters of the sea, but stands open and looks towards them with a huge wide-gaping maw. And therefore also you must admit that these things

haec eadem; neque enim, mortali corpore quae sunt,
ex infinito iam tempore adhuc potuissent
inmensi validas aevi contemnere vires.

Denique tantopere inter se cum maxima mundi 380
pugnent membra, pio nequaquam concita bello,
nonne vides aliquam longi certaminis ollis
posse dari finem? vel cum sol et vapor omnis
omnibus epotis umoribus exsuperarint:
quod facere intendunt, neque adhuc conata patrantur: 385
tantum suppeditant amnes ultraque minantur
omnia diluviare ex alto gurgite ponti,
nequiquam, quoniam verrentes aequora venti
deminuunt radiisque retexens aetherius sol,
et siccare prius confidunt omnia posse 390
quam liquor incepti possit contingere finem.
tantum spirantes aequo certamine bellum
magnis *inter se* de rebus cernere certant,
cum semel interea fuerit superantior ignis
et semel, ut fama est, umor regnarit in arvis. 395
ignis enim superat et lambens multa perussit,
avia cum Phaethonta rapax vis solis equorum
aethere raptavit toto terrasque per omnis.

likewise had a birth; for things which are of mortal body could not for an infinite time back up to the present have been able to set at nought the puissant strength of immeasurable age.

Again since the chiefest members of the world fight so hotly together, fiercely stirred by no hallowed civil warfare, see you not that some limit may be set to their long struggle? either when the sun and all heat shall have drunk up all the waters and gotten the mastery: this they are ever striving to do, but as yet are unable to accomplish their endeavours: such abundant supplies the rivers furnish, and threaten to turn aggressors and flood all things with a deluge from the deep gulph of ocean; all in vain, since the winds sweeping over the seas and the ethereal sun decomposing them with his rays lessen them, and trust to be able to dry all things up before water can attain the end of its endeavour. Such a war do they breathe out with undecided issue, and strive with each other to determine it for mighty ends; though once by the way fire got the upper hand and once, as the story goes, water reigned dominant in the fields. Fire gained the mastery and licked and burnt up many things, when the headstrong might of the horses of the sun dashed from the course and hurried Phaethon through the whole sky

at pater omnipotens ira tum percitus acri
 magnanimum Phaethonta repentī fulminis ictu 400
 deturbavit equis in terram, solque cadenti
 obviuſ aeternam ſuccepit lampada mundi
 diſiectoſque redegit equoſ iunxitque trementis,
 inde ſuum per iter recreavit cuncta gubernans,
 ſcilicet ut veteres Graium cecinere poetae. 405
 quod procul a vera nimis eſt ratione repulſum.
 ignis enim ſuperare poſteſt ubi materiali
 ex infinito ſunt corpora plura coorta;
 inde cadunt vires aliqua ratione revictae,
 aut pereunt reſ exuſtae torrentibus auris. 410
 umor item quondam coepit ſuperare coortuſ,
 ut fama eſt, hominum multas quando obruit urbiſ.
 inde ubi viſ aliqua ratione averſa reſceſſit,
 ex infinito fuerat quaecumque coorta,
 conſtiterunt imbres et flumina vim minuerunt. 415
 Sed quibus ille modis coniectuſ materiali
 fundarit terram et caelum pontique profunda,
 ſoliſ lunai curſuſ, ex ordine ponam.
 nam certe neque conſilio primordia rerum
 ordine ſe ſuo quaeque ſagaci mente locarunt 420

and over all lands. But the almighty father then ſtirred to fierce wrath with a ſudden thunderſtroke daſhed Phaethon down from his horſes to earth, and the ſun meeting him as he fell caught from him the ever-burning lamp of the world and got in hand the ſcattered ſteeds and yoked them ſhaking all over; then guided them on his proper courſe and gave freſh life to all things. Thus to wit have the old poets of the Greeks ſung; though it is all too widely at variance with true reaſon. Fire may gain the maſtery when more bodieſ of matter than uſual have gathered themſelves up out of the infinite; and then its powerſ decay, vanquiſhed in ſome way or other, or elſe things periſh burnt up by the torrid air. Water too of yore gathered itſelf and began to get the maſtery, as the ſtory goeſ, when it whelmed many citieſ of men; and then when all that force that had gathered itſelf up out of the infinite, by ſome meanſ or other waſ turned aſide and withdrew, the rainſ were ſtayed and the riverſ moderated their fury.

But in what wayſ yon concourſe of matter founded earth and heaven and the deepſ of the ſea, the courſeſ of ſun and moon, I will next in order deſcribe. For verily not by deſign did the firſt-beginningſ of thingſ ſtation themſelveſ each in its right place by keen-

nec quos quaeque darent motus pepigere profecto,
 sed quia multa modis multis primordia rerum
 ex infinito iam tempore percita plagis
 ponderibusque suis consuerunt concita ferri
 omnimodisque coire atque omnia pertemptare, 425
 quaecumque inter se possent congressa creare,
 propterea fit uti magnum volgata per aevom
 omne genus coetus et motus experiundo
 tandem convenient ea quae convecta repente
 magnarum rerum fiunt exordia saepe, 430
 terrai maris et caeli generisque animantum.

Hic neque tum solis rota cerni lumine largo
 altivolans poterat nec magni sidera mundi
 nec mare nec caelum nec denique terra neque aer
 nec similis nostris rebus res ulla videri, 435
 sed nova tempestas quaedam molesque coorta .
 440 omne genus de principiis, discordia quorum
 intervalla vias conexus pondera plagas
 concursus motus turbabat proelia miscens,
 propter dissimilis formas variasque figuras 440
 quod non omnia sic poterant coniuncta manere;
 445 nec motus inter sese dare convenientis.
 437 diffugere inde loci partes coepere paresque

sighted intelligence, nor did they bargain sooth to say what motions each should assume, but because the first-beginnings of things many in number in many ways impelled by blows for infinite ages back and kept in motion by their own weights have been wont to be carried along and to unite in all manner of ways and thoroughly to test every kind of production possible by their mutual combinations, therefore it is that spread abroad through great time after trying unions and motions of every kind they at length meet together in those masses which suddenly brought together become often the rudiments of great things, of earth sea and heaven and the race of living things.

At this time then neither could the sun's disk be discerned flying aloft with its abundant light, nor sea nor heaven, nor earth nor air, nor could any thing be seen like to our things, but only a strange stormy crisis and medley, gathered together out of first-beginnings of every kind, whose state of discord joining battle disordered their interspaces passages connexions weights blows clashings motions, because by reason of their unlike forms and varied shapes they could not all remain thus joined together nor fall into mutually harmonious motions. Then next the several parts began to fly asunder and things to be joined like with like

cum paribus iungi res et discludere mundum
 membraque dividere et magnas disponere partes, 445
 446 hoc est, a terris altum secernere caelum,
 et sorsum mare uti secreto umore pateret,
 seorsus item puri secretique aetheris ignes.

Quippe etenim primum terrai corpora quaeque,
 propterea quod erant gravia et perplexa, coibant 450
 in medio atque imas capiebant omnia sedes;
 quae quanto magis inter se perplexa coibant,
 tam magis expressere ea quae mare sidera solem
 lunamque efficerent et magni moenia mundi.
 omnia enim magis haec e levibus atque rutundis 455
 seminibus multoque minoribu' sunt elementis
 quam tellus. ideo, per rara foramina, terrae
 partibus erumpens primus se sustulit aether
 ignifer et multos secum levis abstulit ignis,
 non alia longe ratione ac saepe videmus, 460
 aurea cum primum gemmantis rore per herbas
 matutina rubent radiati lumina solis
 exhalantque lacus nebulam fluvii perennes,
 ipsaque ut interdum tellus fumare videtur;
 omnia quae sursum cum conciliantur, in alto 465
 corpore concreto subtexunt nubila caelum.

and to mark off the world and portion out its members and arrange its mighty parts, that is to say, to separate high heaven from earth, and let the sea spread itself out apart with its unmingled water, and likewise let the fires of ether spread apart pure and unmingled.

For first the several bodies of earth, because they were heavy and closely entangled, met together in the middle and took up all of them the lowest positions; and the more they got entangled and the closer their union, the more they squeezed out those particles which were to make up sea stars sun and moon and the walls of the great world. All these are of smooth and round seeds and of much smaller elements than the earth. Therefore the fire-laden ether first burst out from the different parts of the earth through all the porous openings and lightly bore off with itself many fires; much in the same way as we often see, so soon as the morning light of the beaming sun blushes golden over the grass jewelled with dew, and the pools and the ever-running rivers exhale a mist, and even as the earth itself is sometimes seen to smoke; and when all these are gathered together aloft, then do clouds on high with a now cohering body weave a covering beneath heaven. In this

sic igitur tum se levis ac diffusilis aether
 corpore concreto circumdatus undique *flexit*
 et late diffusus in omnis undique partis
 omnia sic avido complexu cetera saepsit. 470
 hunc exordia sunt solis lunaeque secuta,
 interutraque globi quorum vertuntur in auris;
 quae neque terra sibi adscivit nec maximus aether,
 quod neque tam fuerunt gravia ut depressa sederent,
 nec levia ut possent per summas labier oras, 475
 et tamen interutraque ita sunt ut corpora viva
 versent et partes ut mundi totius extent;
 quod genus in nobis quaedam licet in statione
 membra manere, tamen cum sint ea quae moveantur.
 his igitur rebus retractis terra repente, 480
 maxuma qua nunc se ponti plaga caerula tendit,
 succidit et salso suffudit gurgite fossas.
 inque dies quanto circum magis aetheris aestus
 et radii solis cogeabant undique terram
 verberibus crebris extrema ad limina *in artum*, 485
 in medio ut propulsa suo condensa coiret,
 tam magis expressus salsus de corpore sudor
 augebat mare manando camposque natantis,
 et tanto magis illa foras elabsa volabant

way therefore then the light and expansive ether with its now cohering body swept round and arched itself on all sides and expanding widely in all directions round in this way fenced all other things in with its greedy grasp. After it followed the rudiments of sun and moon, whose spheres turn round in air midway between earth and ether: these neither earth has taken unto itself nor greatest ether, because they were neither heavy enough to sink and settle down nor light enough to glide along the uppermost borders; they yet however are so placed between the two as to wheel along their life-like bodies and yet to be parts of the whole world; just as in us some members may be at rest, while others at the same time are in motion. These things then being withdrawn, the earth in those parts where the vast azure level of ocean now spreads, in a moment sank in and drenched with salt flood the hollows. And every day the more the heats of ether round and the rays of the sun on all sides compressed the earth into a close mass by oft-repeated blows on all its outer edges, so that thus buffeted it was condensed and drawn together about its centre, ever the more did the salt sweat squeezed out of its body increase by its oozings the sea and floating fields, and ever

corpora multa vaporis et aeris altaque caeli 490
 densebant procul a terris fulgentia templa.
 sidebant campi, crescebant montibus altis
 ascensus; neque enim poterant subsidere saxa
 nec pariter tantundem omnes succumbere partis.

Sic igitur terrae concreto corpore pondus 495
 constitit atque omnis mundi quasi limus in-imum
 confluit gravis et subsedit funditus ut faex;
 inde mare inde aer inde aether ignifer ipse
 corporibus liquidis sunt omnia pura relictæ,
 et leviora aliis alia, et liquidissimus aether 500
 atque levissimus aëreas super influit auras,
 nec liquidum corpus turbantibus aëris auris
 commiscet; sinit hæc violentis omnia verti
 turbinibus, sinit incertis turbare procellis,
 ipse suos ignis certo fert impete labens. 505
 nam modice fluere atque uno posse æthera nisu
 significat Pontos, mare certo quod fluit aestu
 unum labendi conservans usque tenorem.

[Motibus astrorum nunc quæ sit causa canamus.
 principio magnus caeli si vortitur orbis, 510
 ex utraque polum parti premere aëra nobis
 dicendum est extraque tenere et claudere utrimque;

the more did those many bodies of heat and air escape and fly abroad and condense far away from earth the high glittering quarters of heaven. The plains sank down, the high hills grew in elevation; for the rocks could not settle down nor all the parts sink to one uniform level.

Thus then the ponderous mass of earth was formed with close-cohering body and all the slime of the world so to speak slid down by its weight to the lowest point and settled at the bottom like dregs. Then the sea, then the air, then the fire-laden ether itself, all are left unmixed with their clear bodies; and some are lighter than others, and clearest and lightest of all ether floats upon the airy currents, and blends not its clear body with the troubled airs; it suffers all these things below to be upset with furious hurricanes, suffers them to be troubled by wayward storms; while it carries along its own fires gliding with a changeless onward sweep. For that ether may stream on gently and with one uniform effort the Pontos shews, a sea which streams with a changeless current, ever keeping due on its uniform gliding course.

Let us now sing what causes the motions of the stars. In the first place, if the great sphere of heaven revolves, we must say that an air presses on the pole at each end and confines it on the outside and closes

inde alium supra fluere atque intendere eodem
 quo volvenda micant aeterni sidera mundi;
 aut alium sup̄ter, contra qui subvehat orbem, 515
 ut fluvios versare rotas atque haustra videmus.
 est etiam quoque uti possit caelum omne manere
 in statione, tamen cum lucida signa ferantur;
 sive quod inclusi rapidi sunt aetheris aestus
 quaerentesque viam circum versantur et ignes 520
 passim per caeli volvunt immania templa;
 sive aliunde fluens alicunde extrinsecus aer
 versat agens ignis; sive ipsi serpere possunt
 quo cuiusque cibus vocat atque invitat euntis,
 flammea per caelum pascentis corpora passim. 525
 nam quid in hoc mundo sit eorum ponere certum
 difficile est; sed quid possit fiatque per omne
 in variis mundis varia ratione creatis,
 id doceo plurisque sequor disponere causas,
 motibus astrorum quae possint esse per omne; 530
 e quibus una tamen sit in hoc quoque causa necessest
 quae vegeat motum signis; sed quae sit earum
 praecipere hautquaquamst pedetemptim progredientis.]

it in at both ends; and then that a third air streams above and moves
 in the same direction in which roll on as they shine the stars of the
 eternal world; or else that this third air streams below in order to carry
 up the sphere in the contrary direction; just as we see rivers turn wheels
 and water-scoops. It is likewise quite possible too that all the heaven
 remains at rest, while at the same time the glittering signs are carried
 on; either because rapid heats of ether are shut in and whirl round
 while seeking a way out and roll their fires in all directions through
 heaven's vast quarters; or else an air streaming from some part from
 another source outside drives and whirls the fires; or else they may
 glide on of themselves going whithersoever the food of each calls and
 invites them, feeding their flamy bodies everywhere throughout heaven.
 For which of these causes is in operation in this world, it is not easy to
 affirm for certain; but what can be and is done throughout the universe
 in various worlds formed on various plans, this I teach, and I go on to
 set forth several causes which may exist throughout the universe for the
 motions of stars; one of which however must in this world also be the
 cause that imparts lively motion to the signs; but to settle absolutely
 which of them it is, is by no means the duty of the man who advances
 step by step.

Terraque ut in media mundi regione quiescat,
 evanescere paulatim et decrescere pondus 535
 convenit, atque aliam naturam supter habere
 ex ineunte aevo coniunctam atque uniter aptam
 partibus aeriis mundi quibus insita vivit.
 propterea non est oneri neque deprimit auras;
 ut sua cuique homini nullo sunt pondere membra 540
 nec caput est oneri collo nec denique totum
 corporis in pedibus pondus sentimus inesse;
 at quaecumque foris veniunt inpostaque nobis
 pondera sunt laedunt, permulto saepe minora.
 usque adeo magni refert quid quaeque obeat res. 545
 sic igitur tellus non est aliena repente
 allata atque auris aliunde obiecta alienis,
 sed pariter prima concepta ab origine mundi
 certaue pars eius, quasi nobis membra videntur.
 praeterea grandi tonitru concussa repente 550
 terra supra quae se sunt concutit omnia motu;
 quod facere haut ulla posset ratione, nisi esset
 partibus aeriis mundi caeloque revincta.
 nam communibus inter se radicibus haerent
 ex ineunte aevo coniuncta atque uniter apta. 555

And in order that the earth may rest in the middle of the world, it is proper that its weight should gradually pass away and be lessened, and that it should have another nature underneath it conjoined from the beginning of its existence and formed into one being with the airy portions of the world in which it is embodied and lives. For this reason it is no burden and does not weigh down the air; just as his limbs are of no weight to a man nor is his head a burden to his neck, nor do we feel that the whole weight of the body rests on the feet; but whatever weights come from without and are laid upon us, hurt us though they are often very much smaller: of such very great moment it is what function each thing has to perform. Thus then the earth is not an alien body suddenly brought in and forced from some other quarter on air alien to it, but was conceived together with it, at the first birth of the world and is a fixed portion of that world, just as our limbs are seen to be to us. Again, the earth when suddenly shaken by loud thunder shakes by its motion all the things which are above it; and this it could in no wise do, unless it had been fast bound with the airy portions of the world and with heaven. For they cohere with one another by common roots, conjoined and formed into a single being from

nonne vides etiam quam magno pondere nobis
 sustineat corpus tenuissima vis animai
 propterea quia tam coniuncta atque uniter apta est?
 denique iam saltu pernici tollere corpus
 quid potis est nisi vis animi quae membra gubernat? 560
 iamne vides quantum tenuis natura valere
 possit, ubi est coniuncta gravi cum corpore, ut aer
 coniunctus terris et nobis est animi vis?

Nec nimio solis maior rota nec minor ardor
 esse potest, nostris quam sensibus esse videtur. 565
 nam quibus e spatiis cumque ignes lumina possunt
 adicere et calidum membris adflare vaporem,
 nil illa his intervallis de corpore libant
 flammaram, nil ad speciem est contractior ignis.
 573 proinde, calor quoniam solis lumenque profusum 570
 570 perveniunt nostros ad sensus et loca mulcent,
 forma quoque hinc solis debet filumque videri,
 572 nil adeo ut possis plus aut minus addere, vere.
 575 lunaque sive notho fertur loca lumine lustrans 575
 sive suam proprio iactat de corpore lucem,
 quidquid id est, nilo fertur maiore figura
 quam, nostris oculis qua cernimus, esse videtur.

the beginning of their existence. See you not too that great as is the weight of our body, the force of the soul, though of the extremest tenuity, supports it, because it is so closely conjoined and formed into a single being with it? Then too what is able to lift the body with a nimble bound save the force of the mind which guides the limbs? Now do you see what power a subtle nature may have, when it is conjoined with a heavy body, as the air is conjoined with the earth and the force of the mind with us?

Again the disk of the sun cannot be much larger nor its body of heat much smaller, than they appear to be to our senses. For from whatever distances fires can reach us with their light and breathe on our limbs burning heat, those distances take away nothing by such spaces between from the body of the flames, the fire is not in the least narrowed in appearance. Therefore since the heat of the sun and the light which it sheds reach our senses and stroke the proper places, the form too and size of the sun must be seen from this earth in their real dimensions, so that you may not add anything whatever more or less. And whether the moon as it is borne on illuminates places with a borrowed light, or emits its own light from its own body, whatever that is, the form with which it is thus borne on is not at all larger than the one which it

- nam prius omnia, quae longe semota tuemur
 aera per multum, specie confusa videntur 580
 quam *minui* filum. quapropter luna necesse est,
 quandoquidem claram speciem certamque figuram
 praebet, ut est oris extremis cumque notata
 quantaque quantast hinc nobis videatur in alto.
 postremo quoscumque vides hinc aetheris ignes; 585
 quandoquidem quoscumque in terris cernimus *ignes*,
 dum tremor *est* clarus, dum cernitur ardor eorum,
 perparvom quiddam interdum mutare videtur
 alteram utram in partem filum, quo longius absunt;
 594 scire licet perquam pauxillo posse minores 590
 esse vel exigua maioris parte brevique.
 590 Illud item non est mirandum, qua ratione
 tantulus ille queat tantum sol mittere lumen,
 quod maria ac terras omnis caelumque rigando
 compleat et calido perfundat cuncta vapore. 595
 597 nam licet hinc mundi patefactum totius unum
 largifluum fontem scatere atque erumpere lumen,
 ex omni mundo quia sic elementa vaporis
 undique conveniunt et sic coniectus eorum 600
 confluit, ex uno capite hic ut profluat ardor.

presents to our eyes seems to us to be. For all things which we see at a great distance through much air, look dimmed in appearance before their size is diminished. Therefore since the moon presents a bright aspect and well-defined form, it must be seen on high by us from this earth precisely as it is in the outline which defines it, and of the size it actually is. Lastly in the case of all those fires of ether which you observe from this earth,—since in the case of fires which we see here on earth, so long as their flickering is distinct, so long as their heat is perceived, their size is seen sometimes to change to a very very small extent either way, according to the distance at which they are,—you may infer that the fires of ether may be smaller than they look in an extremely minute degree, or larger by a very small and insignificant fraction.

This likewise need not excite wonder, how it is that so small a body as yon sun can emit so great a light, enough to flood completely seas and all lands and heaven and to steep all things in its burning heat. It well may be that a single spring for the whole world may open up from this spot and gush out in plenteous stream and shoot forth light, because elements of heat meet together from all sides out of the whole world in such manner and the mass of them thrown together streams to a point

nonne vides etiam quam late parvus aquai
 prata riget fons interdum campisque redundet?
 est etiam quoque uti non magno solis ab igni
 aera percipiat calidis fervoribus ardor, 605
 opportunus ita est si forte et idoneus aer,
 ut queat accendi parvis ardoribus ictus;
 quod genus interdum segetes stipulamque videmus
 accedere ex una scintilla incendia passim.
 forsitan et rosea sol alte lampade lucens 610
 possideat multum caecis fervoribus ignem
 circum se, nullo qui sit fulgore notatus,
 aestifer ut tantum radiorum exaugeat ictum.

Nec ratio solis simplex *et* certa patescit,
 quo pacto aestivis e partibus aegocerotis 615
 brumalis adeat flexus atque inde revertens
 cancri se ut vertat metas ad solstitialis,
 lunaque mensibus id spatium videatur obire,
 annua sol in quo consumit tempora cursu.
 non, inquam, simplex his rebus reddita causast. 620
 nam fieri vel cum primis id posse videtur,
 Democriti quod sancta viri sententia ponit,
 quanto quaeque magis sint terram sidera propter,

in such manner, that this heat wells forth from a single source. See you not too what a breadth of meadow-land a small spring of water sometimes floods, streaming out over the fields? It is likewise possible that heat from the sun's flame though not at all great may infect the whole air with fervent fires, if haply the air is in a suitable and susceptible state, so that it can be kindled when struck by small bodies of heat; thus we see sometimes a general conflagration from a single spark catch fields of corn and stubble. Perhaps too the sun as he shines aloft with rosy lamp has round about him much fire with heats that are not visible and thus the fire may be marked by no radiance, so that fraught with heat it increases to such a degree the stroke of the rays.

Nor with regard to the sun is there one single explanation, certain and manifest, of the way in which he passes from his summer positions to the midwinter turning-point of capricorn and then turning back from thence bends his course to the solstitial goal of cancer, and how the moon is seen once a month to pass over that space, in traversing which the sun spends the period of a year. No single plain cause, I say, has been assigned for these things. It seems highly probable that that may be the truth which the revered judgment of the worthy man Democritus maintains: the nearer the different constellations are to the earth, the

tanto posse minus cum caeli turbine ferri.
 evanescere enim rapidas illius et acris 625
 imminui sup̄ter viris, ideoque relinqui
 paulatim solem cum posterioribu' signis,
 inferior multo quod sit quam fervida signa.
 et magis hoc lunam: quanto demissior eius
 cursus abest procul a caelo terrisque propinquat, 630
 tanto posse minus cum signis tendere cursum.
 flaccidiore etenim quanto iam turbine fertur
 inferior quam sol, tanto magis omnia signa
 hanc adipiscuntur circum praeterque feruntur.
 propterea fit ut haec ad signum quodque reverti 635
 mobilius videatur, ad hanc quia signa revisunt.
 fit quoque ut e mundi transversis partibus aer
 alternis certo fluere alter tempore possit,
 qui queat aestivis solem detrudere signis
 brumalis usque ad flexus gelidumque rigorem, 640
 et qui reiciat gelidis a frigoris umbris
 aestiferas usque in partis et fervida signa.
 et ratione pari lunam stellasque putandumst,
 quae volvunt magnos in magnis orbibus annos,
 aëribus posse alternis e partibus ire. 645
 nonne vides etiam diversis nubila ventis

less they can be carried along with the whirl of heaven; for the velocity of its force, he says, passes away and the intensity diminishes in the lower parts, and therefore the sun is gradually left behind with the rearward signs, because he is much lower than the burning signs. And the moon more than the sun: the lower her path is and the more distant she is from heaven and the nearer she approaches to earth, the less she can keep pace with the signs. For the fainter the whirl is in which she is borne along, being as she is lower than the sun, so much the more all the signs around overtake and pass her. Therefore it is that she appears to come back to every sign more quickly, because the signs go more quickly back to her. It is quite possible too that from quarters of the world crossing the sun's path two airs may stream each in its turn at a fixed time; one of which may force the sun away from the summer signs so far as his midwinter turning-point and freezing cold, and the other may force him back from the freezing shades of cold as far as the heat-laden quarters and burning signs. And in like manner we must suppose that the moon, and the stars which make revolutions of great years in great orbits may pass by means of airs from opposite quarters in turn. See you not too that clouds from contrary winds

diversas ire in partis inferna supernis?
 qui minus illa queant per magnos aetheris orbis
 aestibus inter se diversis sidera ferri?

At nox obruit ingenti caligine terras, 650
 aut ubi de longo cursu sol ultima caeli
 impulit atque suos efflavit languidus ignis
 concussos itere et labefactos aere multo,
 aut quia sub terras cursum convortere cogit
 vis eadem, supra quae terras pertulit orbem. 655

Tempore item certo roseam Matuta per oras
 aetheris auroram differt et lumina pandit,
 aut quia sol idem, sub terras ille revertens,
 anticipat caelum radiis accendere temptans,
 aut quia conveniunt ignes et semina multa 660
 confluere ardoris consuerunt tempore certo,
 quae faciunt solis nova semper lumina gigni;
 quod genus Idaeis fama est e montibus altis
 dispersos ignis orienti lumine cerni,
 inde coire globum quasi in unum et conficere orbem. 665
 nec tamen illud in his rebus mirabile debet
 esse, quod haec ignis tam certo tempore possunt
 semina confluere et solis reparare nitorem.

pass in contrary directions, the upper in a contrary way to the lower? Why may not yon stars just as well be borne on through their great orbits in ether by currents contrary one to the other?

But night buries the earth in thick darkness, either when the sun after his long course has struck upon the utmost parts of heaven and now exhausted has blown forth all his fires shaken by their journey and weakened by passing through much air; or else because the same force which has carried on his orb above the earth, compels him to change his course and pass below the earth.

At a fixed time too Matuta spreads rosy morning over the borders of ether and opens up her light, either because the same sun, coming back below the earth, seizes heaven before his time trying to kindle it with his rays; or because fires meet together and many seeds of heat are accustomed to stream together at a fixed time, which cause new sunlight to be born every day. Thus they tell that from the high mountains of Ida scattered fires are seen at day-break, that these then unite as it were into a single ball and make up an orb. And herein it ought to cause no surprise that these seeds of fire stream together at a time so surely fixed and reproduce the radiance of the sun. For we see

multa videmus enim, certo quae tempore fiunt
 omnibus in rebus. florescunt tempore certo 670
 arbusta et certo dimittunt tempore florem.
 nec minus in certo dentes cadere imperat aetas
 tempore et inpubem molli pubescere veste
 et pariter mollem malis demittere barbam.
 fulmina postremo nix imbres nubila venti 675
 non nimis incertis fiunt in partibus anni.
 namque ubi sic fuerunt causarum exordia prima
 atque ita res mundi cecidere ab origine prima,
 consequē quoque iam redeunt ex ordine certo.
 Crescere itemque dies licet et tabescere noctes, 680
 et minui luces, cum sumant augmina noctes,
 aut quia sol idem sub terras atque superne
 imparibus currens amfractibus aetheris oras
 partit et in partis non aequas dividit orbem,
 et quod ab alterutra detraxit parte, reponit 685
 eius in adversa tanto plus parte relatus,
 donec ad id signum caeli pervenit, ubi anni
 nodus nocturnas exaequat lucibus umbras.
 nam, medio cursu flatus aquilonis et austri,
 distinet aequato caelum discriminē metas 690
 propter signiferi posituram totius orbis,

many occurrences which take place at a fixed time in the case of all things. At a fixed time trees blossom and at a fixed time shed their blossoms; and at a time no less surely fixed age bids the teeth be shed and the boy put on the soft dress of puberty and let a soft beard fall down equally from each cheek. Lastly lightnings snow rains clouds winds take place at not very irregular seasons of year. For where causes from their very first beginnings have been in this way and things have thus fallen out from the first birth of the world, in due sequence too they now come round after a fixed order.

Likewise days may lengthen and nights wane, and days shorten when the nights receive increase, either because the same sun running his course below the earth and above in curves of unlike length parts the borders of ether and divides his orbit into unequal halves; and as he comes round adds on in the opposite half just as much as he has subtracted from the other of the two halves, until he has arrived at that sign of heaven, where the node of the year makes the shades of night of the same length as the daylight. For when the sun's course lies midway between the blast of the north and of the south, heaven keeps his two goals apart at distances now rendered exactly equal on account of the

annua sol in quo concludit tempora serpens,
 obliquo terras et caelum lumine lustrans,
 ut ratio declarat eorum qui loca caeli
 omnia dispositis signis ornata notarunt. 695
 aut quia crassior est certis in partibus aer,
 sub terris ideo tremulum iubar haesitat ignis
 nec penetrare potest facile atque emergere ad ortus.
 propterea noctes hiberno tempore longae
 cessant, dum veniat radiatum insigne diei. 700
 aut etiam, quia sic alternis partibus anni
 tardius et citius consuerunt confluere ignes
 qui faciunt solem certa desurgere parte,
 propterea fit uti videantur dicere verum

 Luna potest solis radiis percussa nitere 705
 inque dies magis *id* lumen convertere nobis
 ad speciem, quantum solis secedit ab orbi,
 donique eum contra pleno bene lumine fulsit
 atque oriens obitus eius super edita vidit;
 inde minutatim retro quasi condere lumen 710
 debet item, quanto propius iam solis ad ignem
 labitur ex alia signorum parte per orbem;

position of the whole starry circle, in gliding through which the sun takes up the period of a year, lighting with slanting rays earth and heaven; as is clearly shewn by the plans of those who have mapped out all the quarters of heaven as they are set off with their array of signs. Or else because the air is denser in certain parts, therefore the quivering beam of fire is retarded below the earth and cannot easily pass through and force its way out to its place of rising: for this reason in winter-time nights linger long, ere the beamy badge of day arrive. Or else, because in the way just mentioned at alternate parts of the year fires are accustomed to stream together more slowly and more quickly, which cause the sun to rise in a certain point, therefore it is that those appear to speak the truth [who suppose a fresh sun to be born every day].

The moon may shine because struck by the sun's rays, and turn that light every day more and more directly towards our sight, in proportion as she recedes from the sun's orb, until just opposite to him she has shone out with full light and at her rising as she soars aloft has beheld his setting; and then by slow steps reversing as it were her course she must in the same way hide her light, the nearer and nearer she now glides to the sun from a different quarter through the circle of

ut faciunt, lunam qui fingunt esse pilai
 consimilem cursusque viam sub sole tenere.
 est etiam quare proprio cum lumine possit 715
 volvier et varias splendoris reddere formas.
 corpus enim licet esse aliud quod fertur et una
 labitur omnimodis occursans officiensque
 nec potis est cerni, quia cassum lumine fertur.
 versarique potest, globus ut, si forte, pilai 720
 dimidia ex parti candenti lumine tinctus,
 versandoque globum variantis edere formas,
 donique eam partem, quaecumque est ignibus aucta,
 ad speciem vertit nobis oculosque patentis;
 inde minutatim retro contorquet et aufert 725
 luciferam partem glomeraminis atque pilai;
 ut Babylonica Chaldaicum doctrina refutans
 astrologorum artem contra convincere tendit,
 proinde quasi id fieri nequeat quod pugnat uterque
 aut minus hoc illo sit cur amplectier ausis. 730
 denique cur nequeat semper nova luna creari
 ordine formarum certo certisque figuris
 inque dies privos aborisci quaeque creata
 atque alia illius reparari in parte locoque,
 difficilest ratione docere et vincere verbis, 735

the signs ; according to the theory of those who suppose the moon to be like a ball and to hold on her course under the sun. She may also very possibly revolve with her own light and display various phases of brightness ; for there may well be another body which is carried on and glides in her company getting before her path and obstructing her in all manner of ways and yet cannot be seen, because it glides on without light. She may also revolve, like it may be to a spherical ball steeped over one half in shining light, and as she rolls round this sphere she may present changing phases, until she has turned that half which is illuminated full towards our sight and open eyes ; then by slow steps she whirls back and withdraws the light-fraught half of the spherical ball ; as the Babylonian science of the Chaldees refuting the system of the astronomers essays to prove in opposition to them ; just as though that which each party fights for might not be equally true, or there were any reason why you should venture to embrace the one theory less than the other. Again, why a new moon should not be born every day after a regular succession of forms and regular phases, and each day the one which is born perish and another be produced in its room and stead, it is not easy to teach by reasoning or prove by words, since so many

ordine cum *possint* tam certo multa creari.
 it ver et Venus, et veris praenuntius ante
 pennatus graditur zephyrus, vestigia propter
 Flora quibus mater praespargens ante *viai*
 cuncta coloribus egregiis et odoribus opplet. 740
 inde loci sequitur calor aridus et comes una
 pulverulenta Ceres *et* etesia flabra aquilonum.
 inde autumnus adit, graditur simul Euhius Euan.
 inde aliae tempestates ventique secuntur,
 altitonans Volturnus et auster fulmine pollens. 745
 tandem bruma nives adfert pigrumque rigorem,
 prodit hiemps, sequitur crepitans hanc dentibus algor.
 quo minus est mirum si certo tempore luna
 gignitur et certo deletur tempore rusus,
 cum fieri possint tam certo tempore multa. 750
 Solis item quoque defectus lunaeque latebras
 pluribus e causis fieri tibi posse putandumst.
 nam cur luna queat terram secludere solis
 lumine et a terris altum caput obstruere ei,
 obiciens caecum radiis ardentibus orbem; 755
 tempore eodem aliut facere id non posse putetur
 corpus quod cassum labatur lumine semper?

things can be born in such a regular succession. Spring and Venus go their way, and spring's harbinger winged zephyr steps on before; and along the path they tread mother Flora straws all the way before them and covers it over with the choicest colours and odours. Next in order follows parching heat and in its company dusty Ceres and the etesian blasts of the north winds. Next autumn advances and Euhius Euan steps on together. Then other seasons and winds follow, loud-roaring Volturnus and the southwind stored with lightning. At last midwinter brings with it snows and benumbing cold; winter goes forth; after it follows cold chattering with its teeth. It is therefore the less strange that a moon is begotten at a fixed time and at a fixed time is destroyed again, since many things may take place at a time so surely fixed.

The eclipses of the sun likewise and the obscurations of the moon you may suppose to take place from many different causes. For why should the moon be able to shut the earth out from the sun's light and keep off from the earth his high-exalted head, placing her dark orb before his burning rays; and yet at the same time it be thought that another body gliding on ever without light cannot do the same? Why

solque suos etiam dimittere languidus ignis
 tempore cur certo nequeat recreareque lumen,
 cum loca praeteriit flammis infesta per auras, 760
 quae faciunt ignis interstingui atque perire?
 et cur terra queat lunam spoliare vicissim
 lumine et oppressum solem super ipsa tenere,
 menstrua dum rigidas coni perlabitur umbras;
 tempore eodem aliut nequeat succurrere lunae 765
 corpus vel supra solis perlabier orbem,
 quod radios interrumpat lumenque profusum?
 et tamen ipsa suo si fulget luna nitore,
 cur nequeat certa mundi languescere parte,
 dum loca luminibus propriis inimica per exit? 770

Quod superest, quoniam magni per caerula mundi
 qua fieri quicquid posset ratione resolvi,
 solis uti varios cursus lunaeque meatus
 noscere possemus quae vis et causa cieret, 775
 quove modo *possent* effecto lumine obire
 et neque opinantis tenebris obducere terras,
 cum quasi conivent et aperto lumine rursum
 omnia convisunt clara loca candida luce,
 nunc redeo ad mundi novitatem et mollia terrae 780

too should not the sun be able, quite exhausted, to lose his fires at a fixed time, and again reproduce his light when in his journey through the air he has passed by spots fatal to his flames, which cause his fires to be quenched and to perish? And why should the earth be able in turn to rob the moon of light and moreover herself to keep the sun suppressed, while in her monthly course she glides through the well-defined shadows of the cone; and yet at the same time another body not be able to pass under the moon or glide above the sun's orb, breaking off its rays and the light it sheds forth? Yes and if the moon shines with her own brightness, why should she not be able to grow faint in a certain part of the world, while she is passing through spots hostile to her own light.

And now further since I have explained in what way every thing might take place throughout the azure heights of the great heaven; how we might know what force and cause set in motion the varied courses of the sun and wanderings of the moon; and in what way their light might be intercepted and they be lost to us and spread darkness over the earth little expecting it, when so to speak they close their eye of light and opening it again do fill all places shining in bright radiance, I now go back to the infancy of the world and the tender age of the fields of earth and

arva, novo fetu quid primum in luminis oras
tollere et incertis cererint committere ventis.

Principio genus herbarum viridemque nitorem
terra dedit circum collis camposque per omnis,
florida fulserunt viridanti prata colore, 785
arboribusque datumst variis exinde per auras
crescendi magnum inmissis certamen habenis.
ut pluma atque pili primum saetaeque creantur
quadripedum membris et corpore pennipotentum,
sic nova tum tellus herbas virgultaque primum 790
sustulit, inde loci mortalia saecula creavit
multa modis multis varia ratione coorta.
nam neque de caelo cecidisse animalia possunt
nec terrestria de salsis exisse lacunis.
linquitur ut merito maternum nomen adepta 795
terra sit, e terra quoniam sunt cuncta creata.
multaque nunc etiam existunt animalia terris
imbribus et calido solis concreta vapore;
quo minus est mirum si tum sunt plura coorta
et maiora, nova tellure atque aethere adulta. 800
principio genus alituum variaequae volucres
ova relinquebant exclusae tempore verno,

shew what first in their early essays of production they resolved to raise into the borders of light and to give in charge to the wayward winds.


In the beginning the earth gave forth all kinds of herbage and verdant sheen about the hills and over all the plains; the flowery meadows glittered with the bright green hue, and to the different trees was given a strong and emulous desire of growing up into the air with full unbridled powers. As feathers and hairs and bristles are first born on the limbs of four-footed beasts and the body of the strong of wing, thus the new earth then first put forth grass and bushes, and next gave birth to the races of mortal creatures springing up many in number in many ways after diverse fashions. For no living creatures can have dropped from heaven nor can those belonging to the land have come out of the salt pools. It follows that with good reason the earth has gotten the name of mother, since all things have been produced out of the earth. And many living creatures even now spring out of the earth taking form by rains and the heat of the sun. It is therefore the less strange if at that time they sprang up more in number and larger in size, having come to maturity in the infancy of earth and ether. First of all the race of fowls and the various birds would leave their eggs, hatched in the springtime, just as now in summer the cicades leave spontaneously

folliculos ut nunc teretis aestate cicadae
 lincunt sponte sua victum vitamque petentes.
 tum tibi terra dedit primum mortalia saecula. 805
 multus enim calor atque umor superabat in arvis.
 hoc ubi quaeque loci regio opportuna dabatur,
 crescebant uteri terram radicibus apti;
 quos ubi tempore maturo patefecerat aestus
 infantum fugiens umorem aurasque petessens, 810
 convertibat ibi natura foramina terrae
 et sucum venis cogebat fundere apertis
 consimilem lactis, sicut nunc femina quaeque
 cum peperit, dulci repletur lacte, quod omnis
 impetus in mammas convertitur ille alimenti. 815
 terra cibum pueris, vestem vapor, herba cubile
 praebebat multa et molli lanugine abundans.
 at novitas mundi nec frigora dura ciebat
 nec nimios aestus nec magnis viribus auras.
 omnia enim pariter crescunt et robora sumunt. 820
 Quare etiam atque etiam maternum nomen adepta
 terra tenet merito, quoniam genus ipsa creavit
 humanum atque animal prope certo tempore fudit
 omne quod in magnis bacchatur montibu' passim,
 aeriasque simul volucres variantibu' formis. 825

their delicate coats in quest of a living and life. Then you must know
 did the earth first give forth races of mortal men. For much heat and
 moisture would then abound in the fields; and therefore wherever a
 suitable spot offered, wombs would grow attached to the earth by roots;
 and when the warmth of the infants, flying the wet and craving the air,
 had opened these in the fulness of time, nature would turn to that
 spot the pores of the earth and constrain it to yield from its opened
 veins a liquid most like to milk, even as now-a-days every woman when
 she has borne, is filled with sweet milk, because all that current of nutri-
 ment streams towards the breasts. To the children the earth would
 furnish food, the heat raiment, the grass a bed rich in abundance of soft
 down. But the fresh youth of the world would give forth neither severe
 colds nor excessive heats nor gales of great violence; for all things
 grow and acquire strength in a like proportion.

Wherefore again and again I say the earth with good title has gotten
 and keeps the name of mother, since she of herself gave birth to man-
 kind and at a time nearly fixed shed forth every beast that ranges wildly
 over the great mountains, and at the same time the fowls of the air with

* The earth supplies the food & the
 clothes & the shelter & the life

sed quia finem aliquam pariendi debet habere,
 destitit, ut mulier spatio defessa vetusto.
 mutat enim mundi naturam totius aetas
 ex alioque alius status excipere omnia debet,
 nec manet ulla sui similis res: omnia migrant, 830
 omnia commutat natura et vertere cogit.
 namque aliut putrescit et aevo debile languet,
 porro aliut clarescit et e contemptibus exit.
 sic igitur mundi naturam totius aetas
 mutat et ex alio terram status excipit alter, 835
 quod pote uti nequeat, possit quod non tulit ante. 

 Multaque tum tellus etiam portenta creare
 conatast mira facie membrisque coorta,
 androgynum, interutraque nec utrum, utrimque remotum,
 orba pedum partim, manuum viduata vicissim, 840
 muta sine ore etiam, sine vultu caeca reperta,
 vinctaque membrorum per totum corpus adhaesu,
 nec facere ut possent quicquam nec cedere quoquam
 nec vitare malum nec sumere quod foret usus.
 cetera de genere hoc monstra ac portenta creabat, 845
 nequiquam, quoniam natura absterruit auctum
 nec potuere cupitum aetatis tangere florem

all their varied shapes. But because she must have some limit set to her bearing, she ceased like a woman worn out by length of days. For time changes the nature of the whole world and all things must pass on from one condition to another, and nought continues like to itself: all things quit their bounds, all things nature changes and compels to alter. One thing crumbles away and is worn and enfeebled with age, then another comes unto honour and issues out of its state of contempt. In this way then time changes the nature of the whole world and the earth passes out of one condition into another, so that now it cannot bear what once it could, and now it can bear what before it did not bear.

And many monsters too the earth at that time essayed to produce, things coming up with with strange face and limbs, the man-woman, a thing between the two and neither the one sex nor the other, widely differing from both; some things deprived of feet, others again destitute of hands, others too proving dumb without mouth, or blind without eyes, and things bound fast by the adhesion of their limbs over all the body, so that they could not do anything nor go anywhere nor avoid the evil nor take what their needs required. Every other monster and portent of this kind she would produce, but all in vain, since nature set a ban on their increase and they could not reach the coveted flower of age nor find food nor be

nec reperire cibum nec iungi per Veneris res.
 multa videmus enim rebus concurrere debere,
 ut propagando possint procudere saecula; 850
 pabula primum ut sint, genitalia deinde per artus
 semina qua possint membris manare remissis;
 feminaque ut maribus coniungi possit, habere
 mutua qui mütent inter se gaudia uterque.

Multaque tum interiisse animantum saecula necessest 855
 nec potuisse propagando procudere prolem.
 nam quaecumque vides vesci vitalibus auris,
 aut dolus aut virtus aut denique mobilitas est
 ex ineunte aevo genus id tutata reservans.
 multaue sunt, nobis ex utilitate sua quae 860
 commendata manent, tutelae tradita nostrae.
 principio genus acre leonum saevaue saecula
 tutatast virtus, volpes dolus et fuga cervos.
 at levisomna canum fido cum pectore corda
 et genus omne quod est veterino semine partum 865
 lanigeraeque simul pecudes et bucera saecula
 omnia sunt hominum tutelae tradita, Memmi.
 nam cupide fugere feras pacemque secuta
 sunt et larga suo sine pabula parta labore,

united in marriage. For we see that many conditions must meet together in things in order that they may beget and continue their kinds; first a supply of food, then a way by which the birth-producing seeds throughout the frame may stream from the relaxed limbs; also in order that the woman may be united with the male, the possession of organs whereby they may each interchange mutual joys.

And many races of living things must then have died out and been unable to beget and continue their breed. For in the case of all things which you see breathing the breath of life, either craft or courage or else speed has from the beginning of its existence protected and preserved each particular race. And there are many things which, recommended to us by their useful services, continue to exist consigned to our protection. In the first place the fierce breed of lions and the savage races their courage has protected, foxes their craft and stags their proneness to flight. But light-sleeping dogs with faithful heart in breast and every kind which is born of the seed of beasts of burden and at the same time the woolly flocks and the horned herds are all consigned, Memmius, to the protection of man. For they have ever fled with eagerness from wild-beasts and have ensued peace, and plenty of food has been obtained

quae damus utilitatis eorum praemia causa. 870
 at quis nil horum tribuit natura, nec ipsa
 sponte sua possent ut vivere nec dare nobis
 utilitatem aliquam quare pateremur eorum
 praesidio nostro pasci genus esseque tutum,
 scilicet haec aliis praedae lucroque iacebant 875
 indupedita suis fatalibus omnia vinclis,
 donec ad interitum genus id natura redegit.

Sed neque Centauri fuerunt, nec tempore in ullo
 esse queunt duplici natura et corpore bino
 ex alienigenis membris compacta, potestas 880
 hinc illinc visque ut non sat par esse potissit.
 id licet hinc quamvis hebeti cognoscere corde.
 principio circum tribus actis impiger annis
 floret ecus, puer hautquaquam; nam saepe etiam nunc
 ubera mammaram in somnis lactantia quaeret. 885
 post ubi ecum validae vires aetate senecta
 membraque deficiunt fugienti languida vita,
 tum demum puero illi aevo florente iuventas
 occipit et molli vestit lanugine malas.
 ne forte ex homine et veterino semine equorum 890
 confieri credas Centauros posse neque esse,

without their own labour, as we give it in requital of their useful services. But those to whom nature has granted none of these qualities, so that they could neither live by their own means nor perform for us any useful service in return for which we should suffer their kind to feed and be safe under our protection, those, you are to know, would lie exposed as a prey and booty of others, hampered all in their own death-bringing shackles, until nature brought that kind to utter destruction.

But Centaurs never have existed, and at no time can there exist things of twofold nature and double body formed into one frame out of limbs of alien kinds, such that the faculties and powers of this and that portion cannot be sufficiently like. This however dull of understanding you may learn from what follows. To begin, a horse when three years have gone round is in the prime of his vigour, far different the boy: often even at that age he will call in his sleep for the milk of the breast. Afterwards when in advanced age his lusty strength and limbs now faint from ebbing life fail the horse, then and not till then youth in the flower of age commences for that boy and clothes his cheeks in soft down; that you may not haply believe that out of a man and the burden-carrying seed of horses Centaurs can be formed and have being; or that Scyllas with

aut rabidis canibus succinctas semimarinis
 corporibus Scyllas et cetera de genere horum,
 inter se quorum discordia membra videmus;
 quae neque florescunt pariter nec robora sumunt 895
 corporibus neque proiciunt aetate senecta
 nec simili Venere ardescunt nec moribus unis
 conveniunt, neque sunt eadem iucunda per artus.
 quippe videre licet pinguescere saepe cicuta
 barbigeras pecudes, homini quae est acre venenum. 900
 flamma quidem vero cum corpora fulva leonum
 tam soleat torrere atque urere quam genus omne
 visceris in terris quodcumque et sanguinis extet,
 qui fieri potuit, triplici cum corpore ut una,
 prima leo, postrema draco, media ipsa, Chimaera 905
 ore foras acrem flaret de corpore flammam?
 quare etiam tellure nova caeloque recenti
 talia qui fingit potuisse animalia gigni,
 nixus in hoc uno novitatis nomine inani,
 multa licet simili ratione effutiat ore, 910
 aurea tum dicat per terras flumina vulgo
 fluxisse et gemmis florere arbusta suesse ~~suasse~~
 aut hominem tanto membrorum esse impete natum,
 trans maria alta pedum nisus ut ponere posset

bodies half those of fishes girdled round with raving dogs can exist, and all other things of the kind, whose limbs we see cannot harmonise together; as they neither come to their flower at the same time nor reach the fulness of their bodily strength nor lose it in advanced old age, nor burn with similar passions nor have compatible manners, nor feel the same things give pleasure throughout their frames. Thus we may see bearded goats often fatten on hemlock which for man is rank poison. Since flame moreover is wont to scorch and burn the tawny bodies of lions just as much as any other kind of flesh and blood existing on earth, how could it be that a single chimera with triple body, in front a lion, behind a dragon, in the middle the goat whose name it bears, could breathe out at the mouth fierce flame from its body? Wherefore also he who fables that in the new time of the earth and the fresh youth of heaven such living creatures could have been begotten, resting upon this one futile term new, may babble out many things in like fashion, may say that rivers ran with gold over all parts of the earth, and that trees were wont to blossom with precious stones, or that man was born with such giant force of frame that he could wade on foot through deep seas and whirl

et manibus totum circum se vertere caelum. 915
 nam quod multa fuere in terris semina rerum
 tempore quo primum tellus animalia fudit,
 nil tamen est signi mixtas potuisse creari
 inter se pecudes compactaque membra animantum,
 propterea quia quæ de terris nunc quoque abundant 920
 herbarum genera ac fruges arbustaque laeta
 non tamen inter se possunt complexa creari,
 sed res quaeque suo ritu procedit et omnes
 foedere naturae certo discrimina servant.
 / At genus humanum multo fuit illud in arvis 925
 durius, ut decuit, tellus quod dura creasset,
 et maioribus et solidis magis ossibus intus
 fundatum, validis aptum per viscera nervis,
 nec facile ex aestu nec frigore quod caperetur
 nec novitate cibi nec labi corporis ulla. 930
 multaque per caelum solis volventia lustra
 volgivago vitam tractabant more ferarum.
 nec robustus erat curvi moderator aratri
 quisquam, nec scibat ferro molirier arva
 nec nova defodere in terram virgulta neque altis 935
 arboribus veteres decidere falcibu' ramos.
 quod sol atque imbres dederant, quod terra crearat

the whole heaven about him with his hands. For the fact that there were many seeds of things in the earth what time it first shed forth living creatures, is yet no proof that there could have been produced beasts of different kinds mixed together, and limbs of different living things formed into a single frame, because the kinds of herbage and corn and joyous trees which now also spring in plenty out of the earth yet cannot be produced with the several sorts plaited together into one whole, but each thing goes on after its own fashion, and all preserve their distinctive differences according to a fixed law of nature.

But the race of man then in the fields was much harder, as beseemed it to be, since the hard earth had produced it; and built on a groundwork of larger and more solid bones within, knit with powerful sinews throughout the frame of flesh; not lightly to be disabled by heat or cold or strange kinds of food or any malady of body. And during the revolution of many lustres of the sun through heaven they led a life after the roving fashion of wild-beasts. No one then was a sturdy guider of the bent plough or knew how to labour the fields with iron or plant in the ground young saplings or lop with pruning-hooks old boughs from the high trees. What the sun and rains had given, what the earth had

sponte sua, satis id placabat pectora donum.
 glandiferas inter curabant corpora quercus
 plerumque; et quae nunc hiberno tempore cernis 940
 arbita puniceo fieri matura colore,
 plurima tum tellus etiam maiora ferebat.
 multaque praeterea novitas tum florida mundi
 pabula dura tulit, miseris mortalibus ampla.
 at sedare sitim fluvii fontesque vocabant, 945
 ut nunc montibus e magnis decursus aquai
 claru' citat late sitientia saecula ferarum.
 denique nota vagi silvestria templa tenebant
 nympharum, quibus e scibant umori' fluenta
 lubrica proluvie larga lavere umida saxa, 950
 umida saxa, super viridi stillantia musco,
 et partim plano scatere atque erumpere campo.
 necdum res igni scibant tractare neque uti
 pellibus et spoliis corpus vestire ferarum,
 sed nemora atque cavos montis silvasque colebant 955
 et frutices inter condebant squalida membra
 verbera ventorum vitare imbrisque coacti.
 nec commune bonum poterant spectare neque ullis
 moribus inter se scibant nec legibus uti

produced spontaneously, was guerdon sufficient to content their hearts. Among acorn-bearing oaks they would refresh their bodies for the most part; and the arbuté-berries which you now see in the winter-time ripen with a bright scarlet hue, the earth would then bear in greatest plenty and of a larger size; and many coarse kinds of food besides the teeming freshness of the world then bare, more than enough for poor wretched men. But rivers and springs invited to slake thirst, even as now a rush of water down from the great hills summons with clear plash far and wide the thirsty races of wild-beasts. Then too as they ranged about they would occupy the well-known woodland temples of the nymphs, out of which they knew that smooth-gliding streams of water with a copious gush bathed the dripping rocks, the dripping rocks, trickling down over the green moss; and in parts welled and bubbled out over the level plain. And as yet they knew not how to apply iron to their purposes or to make use of skins and clothe their body in the spoils of wild-beasts, but they would dwell in woods and mountain-caves and forests and shelter in the brushwood their squalid limbs when driven to shun the buffeting of the winds and the rains. And they were unable to look to the general weal and knew not how to make a common use of any

- quod cuique obtulerat praedae fortuna, ferebat 960
 sponte sua sibi quisque valere et vivere doctus.
 et Venus in silvis iungebat corpora amantum;
 conciliabat enim vel mutua quamque cupido
 vel violenta viri vis atque inpena libido
 vel pretium, glandes atque arborea vel pira lecta. 965
 et manuum mira freti virtute pedumque
 consecrabantur silvestria saecula ferarum
 975 missilibus saxis et magno pondere clavae;
 968 multaque vincebant, vitabant pauca latebris;
 (saetigerisque pares subu' sic silvestria membra) 970
 nuda dabant terrae nocturno tempore capti,
 circum se foliis ac frondibus involventes.
 nec plangore diem magno solemque per agros
 quaerebant pavidi palantes noctis in umbris,
 974 sed taciti respectabant somnoque sepulti, 975
 976 dum rosea face sol inferret lumina caelo.
 a parvis quod enim consuerant cernere semper
 alterno tenebras et lucem tempore gigni,
 non erat ut fieri posset mirarier umquam
 nec diffidere ne terras aeterna teneret 980
 nox in perpetuum detracto lumine solis.

customs or laws. Whatever prize fortune threw in his way, each man would bear off, trained at his own discretion to think of himself and live for himself alone. And Venus would join the bodies of lovers in the woods; for each woman was gained over either by mutual desire or the headstrong violence and vehement lust of the man or a bribe of some acorns and arbutus-berries or choice pears. And trusting to the marvellous powers of their hands and feet they would pursue the forest-haunting races of wild-beasts with showers of stones and club of ponderous weight; and many they would conquer, a few they would avoid in hiding-places; and like to bristly swine just as they were they would throw their savage limbs all naked on the ground, when overtaken by night, covering themselves up with leaves and boughs. Yet never with loud wailings would they call for the daylight and the sun, wandering terror-stricken over the fields in the shadows of night, but silent and buried in sleep they would wait, till the sun with rosy torch carried light into heaven; for accustomed as they had been from childhood always to see darkness and light begotten time about, never could any wonder come over them, nor any misgiving that never-ending night would cover the earth and the light of the sun be withdrawn for evermore. But what gave them

sed magis illud erat curae, quod saecla ferarum
 infestam miseris faciebant saepe quietem.
 eiectique domo fugiebant saxea tecta
 spumigeri suis adventu valide leonis
 atque intempesta cedebant nocte paventes
 hospitibus saevis instrata cubilia fronde.

985

Nec nimio tum plus quam nunc mortalia saecla
 dulcia linquebant labentis lumina vitae.

unus enim tum quisque magis deprensus eorum
 pabula viva feris praebebat, dentibus haustus,
 et nemora ac montis gemitu silvasque replebat
 viva videns vivo sepeliri viscera busto.

990

at quos effugium servarat corpore adeso,
 posterius tremulas super ulcera taetra tenentes

995

palmas horriferis accibant vocibus Orcum,
 donique eos vita privarant vermina saeva
 expertis opis, ignaros quid volnera vellent.

at non multa virum sub signis milia ducta

una dies dabat exitio nec turbida ponti

1000

aequora fligebant navis ad saxa virosque.

hic temere incassum frustra mare saepe coortum

saevibat leviterque minas ponebat inanis,

nec poterat quemquam placidi pellacia ponti

trouble was rather the races of wild-beasts which would often render repose fatal to the poor wretches. And driven from their home they would fly from their rocky shelters on the approach of a foaming boar or a strong lion, and in the dead of night they would surrender in terror to their savage guests their sleeping-places strawn with leaves.

Nor then much more than now would the races of mortal men leave the sweet light of ebbing life. For then this one or that other one of them would be seized, and torn open by their teeth would furnish to the wild-beasts a living food, and would fill with his moaning woods and mountains and forests as he looked on his living flesh ^{being} buried in a living grave. But those whom flight had saved with body eaten into, holding ever after their quivering palms over the noisome sores would summon death with appalling cries, until cruel gripings had rid them of life, forlorn of help, unwitting what wounds wanted. But then a single day gave not over to death many thousands of men marching with banners spread, nor the stormy waters of the sea dashed on the rocks men and ships. At this time the sea would often rise up and rage without aim, without purpose, without result, and just as lightly put off its empty threats; nor could the winning wiles of the calm sea treacherously

subdola pellicere in fraudem ridentibus undis. 1005
 IMPROBA NAVIGII RATIO TUM CAECA IACEBAT
 tum penuria deinde cibi languentia leto
 membra dabat, contra nunc rerum copia mersat.
 illi imprudentes ipsi sibi saepe venenum
 vergebant, nunc dant aliis sollertius ipsi. 1010

Inde casas postquam ac pellis ignemque pararunt,
 et mulier coniuncta viro concessit in unum
 conubium, prolemque ex se videre creatam,
 tum genus humanum primum mollescere coepit.
 ignis enim curavit ut alsia corpora frigus 1015
 non ita iam possent caeli sub tegmine ferre,
 et Venus inminuit viris puerique parentum
 blanditiis facile ingenium fregere superbum.
 tunc et amicitiam coeperunt iungere aventes
 finitimi inter se nec laedere nec violari, 1020
 et pueros commendarunt muliebrequae saeculum,
 vocibus et gestu cum balbe significarent
 imbecillorum esse aecum misererier omnis.
 nec tamen omnimodis poterat concordia gigni,
 sed bona magnaue pars servabat foedera caste; 1025
 aut genus humanum iam tum foret omne peremptum
 nec potuisset adhuc perducere saecula propago.

entice any one to his ruin with laughing waters. Then too want of food would consign to death their fainting frames, now on the contrary tis plenty sinks into ruin. They unwittingly would often pour out poison for themselves; now with nicer skill men give it purposely to others.

Next after they had got themselves huts and skins and fire, and the woman united with the man passed into the bonds of marriage with one, and they saw an offspring born from them, then first mankind began to soften. For fire made their chilled bodies less able now to bear the frost beneath the canopy of heaven, and Venus impaired their strength and children with their caresses soon broke down the haughty temper of parents. Then too neighbours began to join in a league of friendship mutually desiring neither to do nor suffer harm; and asked for indulgence to children and womankind, when with cries and gestures they declared in stammering speech that meet it is for all to have mercy on the weak. And though harmony could not be established without exception, yet a very large portion observed their agreements with good faith, or else the race of man would then have been wholly cut off, nor could the breed have continued their generations to this day.

At varios linguae sonitus natura subegit
 mittere et utilitas expressit nomina rerum,
 non alia longe ratione atque ipsa videtur 1030
 protrahere ad gestum pueros infantia linguae,
 cum facit ut digito quae sint praesentia monstrent.
 sentit enim vim quisque suam quoad possit abuti.
 cornua nata prius vitulo quam frontibus extent,
 illis iratus petit atque infestus inurget. 1035
 at catuli pantherarum scymnique leonum
 unguibus ac pedibus iam tum morsuque repugnant,
 vix etiam cum sunt dentes unguisque creati.
 alituum porro genus alis omne videmus
 fidere et a pinnis tremulum petere auxiliatum. 1040
 proinde putare aliquem tum nomina distribuisse
 rebus et inde homines didicisse vocabula prima,
 desiperest. nam cur hic posset cuncta notare
 vocibus et varios sonitus emittere linguae,
 tempore eodem alii facere id non quisse putentur? 1045
 praeterea si non alii quoque vocibus usi
 inter se fuerant, (unde insita notities est
 utilitatis) et unde data est huic prima potestas,
 quid vellet facere ut sciret animoque videret?

But nature impelled them to utter the various sounds of the tongue and use struck out the names of things, much in the same way as the inability to speak is seen in its turn to drive children to the use of gestures, when it forces them to point with the finger at the things which are before them. For every one feels how far he can make use of his peculiar powers. Ere the horns of a calf are formed and project from his forehead, he butts with it when angry and pushes out in his rage. Then whelps of panthers and cubs of lions fight with claws and feet and teeth at a time when teeth and claws are hardly yet formed. Again we see every kind of fowl trust to wings and seek from pinions a fluttering succour. Therefore to suppose that some one man at that time apportioned names to things and that men from him learnt their first words, is sheer folly. For why should this particular man be able to denote all things by words and to utter the various sounds of the tongue, and yet at the same time others be supposed not to have been able to do so? Again if others as well as he had not made use of words among themselves, whence was implanted in this man the previous conception of its use and whence was given to him the original faculty, to know and perceive in mind what he wanted to do? Again one man could not

cogere item pluris unus victosque domare 1050
 non poterat, rerum ut perdiscere nomina vellent.
 nec ratione docere ulla suadereque surdis,
 quid sit opus facto, facilest; neque enim paterentur
 nec ratione ulla sibi ferrent amplius auris
 vocis inauditos sonitus obtundere frustra. 1055
 postremo quid in hac mirabile tantoperest re,
 si genus humanum, cui vox et lingua vigeret,
 pro vario sensu varia res voce notaret?
 cum pecudes mutae, cum denique saecula ferarum
 dissimilis soleant voces variasque ciere, 1060
 cum metus aut dolor est et cum iam gaudia gliscunt.
 quippe etenim licet id rebus cognoscere apertis.
 inritata canum cum primum magna Molossum
 mollia ricta fremunt duros nudantia dentes,
 longe alio sonitu rabie restricta minantur, 1065
 et cum iam latrant et vocibus omnia complent.
 et catulos blande cum lingua lambere temptant
 aut ubi eos iactant pedibus morsuque petentes
 suspensis teneros imitantur dentibus haustus,
 longe alio pacto gannitu vocis adulant, 1070
 et cum deserti baubantur in aedibus aut cum

constrain subjugate and force many to choose to learn the names of things. It is no easy thing in any way to teach and convince the deaf of what is needful to be done; for they never would suffer nor in any way endure sounds of voice hitherto unheard to continue to be dinned fruitlessly into their ears. Lastly what is there so passing strange in this circumstance, that the race of men whose voice and tongue were in full force, should denote things by different words according to their different meanings? since dumb brutes, yes and the races of wild-beasts are accustomed to give forth distinct and varied sounds, when they have fear or pain and when joys are rife. This you may learn from facts plain to sense: when the large spongy opened lips of Molossian dogs begin to growl enraged and bare their hard teeth, thus drawn back in rage they threaten in a tone far different from that in which they bark outright and fill with sounds all the places round. Again when they essay fondly to lick their whelps with their tongue or when they toss them with their feet and snapping at them make a feint with lightly closing teeth of swallowing though with gentle forbearance, they caress them with a yelping sound of a sort greatly differing from that which they utter when left alone in a house they bay or when they slink away howling from

plorantis fugiunt summisso corpore plagas.
 denique non hinnitus item differre videtur,
 inter equas ubi equus florenti aetate iuvençus
 pinnigeri saevit calcaribus ictus amoris, 1075
 et fremitum patulis ubi naribus edit ad arma,
 et cum sic alias concussis artibus hinnit?
 postremo genus alituum variaequæ volucres,
 accipitres atque ossifragæ mergique marinis
 fluctibus in salso victum vitamque petentes, 1080
 longe alias alio iaciunt in tempore voces,
 et quom de victu certant prædaequæ repugnant.
 et partim mutant cum tempestatibus una
 raucisonos cantus, cornicum ut sæcla vetusta
 corvorumque greges ubi aquam dicuntur et imbris 1085
 poscere et interdum ventos aurasque vocare.
 ergo si varii sensus animalia cogunt,
 mutâ tamen cum sint, varias emittere voces,
 quanto mortalis magis æcumst tum potuisse
 dissimilis alia atque alia res voce notare! 1090

[Illud in his rebus tacitus ne forte requiras,
 fulmen detulit in terram mortalibus ignem
 primitus, inde omnis flammæ ardor.

blows with a crouching body. Again is not the neigh too seen to differ, when a young stallion in the flower of age rages among the mares smitten by the goads of winged love, and when with wide-stretched nostrils he snorts out the signal to arms, and when as it chances on any other occasion he neighs with limbs all shaking? Lastly the race of fowls and the different winged creatures, hawks and osprays and gulls seeking their living in the salt water mid the waves of the sea, utter at a different time noises widely differing from those they make when they are fighting for food and struggling with their prey. And some of them change together with the weather their harsh croakings, as the long-lived races of crows and flocks of rooks when they are said to be calling for water and rain and sometimes to be summoning winds and gales. Therefore if different sensations compel creatures, dumb though they be, to utter different sounds, how much more natural it is that mortal men in those times should have been able to denote dissimilar things by many different words!

And lest haply on this head you ask in silent thought this question, it was lightning that brought fire down on earth for mortals in the beginning; thence the whole heat of flames is spread abroad. Thus we see

multa videmus enim caelestibus inlita flammis
 fulgère, cum caeli donavit plāga vapore. 1095
 et ramosa tamen cum ventis pulsa vacillans
 aestuat in ramos incumbens arboris arbor,
 exprimitur validis extritus viribus ignis
 et micat interdum flammai fervidus ardor,
 mutua dum inter se rami stirpesque teruntur. 1100
 quorum utrumque dedisse potest mortalibus ignem.
 inde cibum coquere ac flammae mollire vapore
 sol docuit, quoniam mitescere multa videbant
 verberibus radiorum atque aestu victa per agros.
 Inque dies magis hi victum vitamque priorem 1105
 commutare novis monstrabant rebu' benigni,
 ingenio qui praestabant et corde vigeant.
 condere coeperunt urbis arcemque locare
 praesidium reges ipsi sibi perfugiumque,
 et pecus atque agros divisere atque dedere 1110
 pro facie cuiusque et viribus ingenioque;
 nam facies multum valuit viresque vigentes.
 posterius res inventast aurumque repertum,
 quod facile et validis et pulchris dempsit honorem;
 divitioris enim sectam plerumque secuntur 1115

many things shine dyed in flames of heaven, when the stroke from
 heaven has stored them with its heat. Ay and besides this when a
 branching tree sways to and fro and tosses about under the buffeting of
 the winds, pressing against the boughs of another tree, fire is forced out
 by the power of the violent friction, and sometimes the burning heat of
 flame flashes out, the boughs and stems rubbing against each other.
 Now either of these accidents may have given fire to men. Next the
 sun taught them to cook food and soften it with the heat of flame, since
 they would see many things grow mellow, when subdued by the strokes
 of the rays and by heat throughout the fields.

And more and more every day men who excelled in intellect and
 were of vigorous understanding, would kindly show them how to ex-
 change their former way of living for new methods. Kings began to
 build towns and lay out a citadel as a place of strength and of refuge for
 themselves, and divided cattle and lands and gave to each man in pro-
 portion to his personal beauty and strength and intellect; for beauty and
 vigorous strength were much esteemed. Afterwards wealth was dis-
 covered and gold found out, which soon robbed of their honours strong
 and beautiful alike; for men however valiant and beautiful of person

- quamlibet et fortes et pulchro corpore creti.
 quod si quis vera vitam ratione gubernet,
 divitiae grandes homini ^{est} sunt vivere—parce
 aequo animo; neque enim est umquam penuria parvi.
 at claros homines voluerunt se atque potentes; 1120
 ut fundamento stabili fortuna maneret
 et placidam possent opulenti degere vitam,
 nequiquam, quoniam ad summum succedere honorem
 certantes iter infestum fecere viai,
 et tamen e summo, quasi fulmen, deicit ictos 1125
 invidia interdum contemptim in Tartara taetra;
 1131 invidia quoniam, ceu fulmine, summa vaporant
 plerumque et quae sunt aliis magis edita cumque;
 1127 ut satius multo iam sit parere quietum
 quam regere imperio res velle et regna tenere. 1130
 proinde sine incassum defessi sanguine sudent,
 angustum per iter luctantes ambitionis;
 1133 quandoquidem sapiunt alieno ex ore petuntque
 res ex auditis potius quam sensibus ipsis,
 nec magis id nunc est neque erit mox quam fuit ante. 1135
 — Ergo regibus occisis subversa iacebat
 pristina maiestas soliorum et sceptrum superba,

generally follow in the train of the richer man. But were a man to order his life by the rules of true reason, a frugal subsistence joined to a contented mind is for him great riches; for never is there any lack of a little. But men desired to be famous and powerful, in order that their life might rest on a firm foundation and they might be able by their wealth to lead a tranquil life; but in vain, since in their struggle to mount up to the highest dignities they rendered their path one full of danger; and even if they reach it, yet envy like a thunderbolt sometimes strikes and dashes men down from the highest point with ignominy into noisome Tartarus; since the highest summits and those elevated above the level of other things are mostly blasted by envy as by a thunderbolt; so that far better it is to obey in peace and quiet than to wish to rule with power supreme and be the master of kingdoms. Therefore let men wear themselves out to no purpose and sweat drops of blood, as they struggle on along the strait road of ambition, since they gather their knowledge from the mouths of others and follow after things from hearsay rather than their own apprehension; and this prevails not now nor will prevail by and bye any more than it has prevailed before.

Kings therefore being slain the old majesty of thrones and proud sceptres were overthrown and laid in the dust, and the glorious badge of

et capitis summi praeclarum insigne cruentum
 sub pedibus vulgi magnum lugebat honorem;
 nam cupide conculcatur nimis ante metutum. 1140
 res itaque ad summam faecem turbasque redibat,
 imperium sibi cum ac summatum quisque petebat.
 inde magistratum partim docuere creare
 iuraque constituere, ut vellent legibus uti.
 nam genus humanum, defessum vi colere aevom, 1145
 ex inimiciis languebat; quo magis ipsum
 sponte sua cecidit sub leges artaque iura.
 acrius ex ira quod enim se quisque parabat
 ulcisci quam nunc concessumst legibus aequis,
 hanc ob rem est homines pertaesum vi colere aevom. 1150
 inde metus maculat poenarum praemia vitae.
 circumretit enim vis atque iniuria quemque
 atque, unde exortast, ad eum plerumque revertit,
 nec facilest placidam ac pacatam degere vitam
 qui violat factis communia foedera pacis. 1155
 etsi fallit enim divom genus humanumque,
 perpetuo tamen id fore clam diffidere debet;
 quippe ubi se multi per somnia saepe loquentes
 aut morbo delirantes protraxe ferantur
 et celata *mala* in medium et peccata dedisse.] 1160
or die

the sovereign head bloodstained beneath the feet of the rabble mourned
 for its high prerogative; for that is greedily trampled on which before
 was too much dreaded. Power therefore would fall to the lowest dregs
 and to unruly mobs, each man seeking for himself empire and sovereignty.
 Then a portion of them taught men to elect legal officers, and drew up
 codes, to induce men to obey the laws. For mankind, tired out with a
 life of brute force, lay exhausted from its feuds; and therefore the more
 readily it submitted of its own freewill to laws and stringent codes. For
 as each one moved by anger took measures to avenge himself with
 more severity than is now permitted by equitable laws, for this reason
 men grew sick of a life of brute force. Thence fear of punishment mars
 the prizes of life; for violence and wrong enclose all who commit them in
 their meshes and do mostly recoil on him from whom they began; and
 it is not easy for him who transgresses the terms of the public peace to
 pass a tranquil and a peaceful existence. For though he eludes God and
 man, yet he cannot but feel a misgiving that his secret can be kept for
 ever; seeing that many by speaking in their dreams or in the wanderings
 of disease have often we are told betrayed themselves and have disclosed
 their hidden deeds of evil and their sins.

Nunc quae causa deum per magnas numina gentis
 pervulgarit et ararum compleverit urbis
 suscipiendaque curarit sollemnia sacra,
 quae nunc in magnis florent sacra rebu' locisque,
 unde etiam nunc est mortalibus insitus horror 1165
 qui delubra deum nova toto suscitāt orbi
 terrarum et festis cogit celebrare diebus,
 non ita difficilest rationem reddere verbis.
 quippe etenim iam tum divom mortalia saecula
 egregias animo facies vigilante videbant 1170
 et magis in somnis mirando corporis auctu.
 his igitur sensum tribuebant propterea quod
 membra movere videbantur vocesque superbas
 mittere pro facie praeclara et viribus amplis.
 aeternamque dabant vitam, quia semper eorum 1175
 subpeditabatur facies et forma manebat,
 et tamen omnino quod tantis viribus auctos
 non temere ulla vi convinci posse putabant.
 fortunisque ideo longe praestare putabant,
 quod mortis timor haut quemquam vexaret eorum, 1180
 et simul in somnis quia multa et mira videbant
 efficere et nullum capere ipsos inde laborem.
 praeterea caeli rationes ordine certo

And now what cause has spread over great nations the worship of the divinities of the gods and filled towns with altars and led to the performance of stated sacred rites, rites now in fashion on solemn occasions and in solemn places, from which even now is implanted in mortals a shuddering awe which raises new temples of the gods over the whole earth and prompts men to crowd them on festive days, all this it is not so difficult to explain in words. Even then in sooth the races of mortal men would see in waking mind glorious forms, would see them in sleep of yet more marvellous size of body. To these then they would attribute sense, because they seemed to move their limbs and to utter lofty words suitable to their glorious aspect and surpassing powers. And they would give them life everlasting, because their face would ever appear before them and their form abide; yes and yet without all this, because they would not believe that beings possessed of such powers could lightly be overcome by any force. And they would believe them to be preeminent in bliss, because none of them was ever troubled with the fear of death, and because at the same time they would see them perform many miracles, yet feel on their part no fatigue from the effort. Again they would see the system of heaven and the different seasons of the years

et varia annorum cernebant tempora verti
 nec poterant quibus id fieret cognoscere causis. 1185
 ergo perfugium sibi habebant omnia divis
 tradere et illorum nutu facere omnia flecti.
 in caeloque deum sedes et templa locarunt,
 per caelum volvi quia nox et luna videtur,
 luna dies et nox et noctis signa severa 1190
 noctivagaeque faces caeli flammaeque volantes,
 nubila sol imbres nix venti fulmina grando
 et rapidi fremitus et murmura magna minarum.

O genus infelix humanum, talia divis
 cum tribuit facta atque iras adiunxit acerbis! 1195
 quantos tum gemitus ipsi sibi, quantaque nobis
 volnera, quas lacrimas peperere minoribu' nostris!
 nec pietas ullast velatum saepe videri
 vertier ad lapidem atque omnis accedere ad aras
 nec procumbere humi prostratum et pandere palmas 1200
 ante deum delubra nec aras sanguine multo
 spargere quadrupedum nec votis nectere vota,
 sed mage pacata posse omnia mente tueri.
 nam cum suspicimus magni caelestia mundi
 templa, super stellisque micantibus aethera fixum, 1205
 et venit in mentem solis lunaeque viarum,

come round in regular succession, and could not find out by what causes this was done; therefore they would seek a refuge in handing over all things to the gods and supposing all things to be guided by their nod. And they placed in heaven the abodes and realms of the gods, because night and moon are seen to roll through heaven, moon day and night and night's austere constellations and night-wandering meteors of the sky and flying bodies of flame, clouds sun rains snow winds lightnings hail and rapid rumblings and loud threatful thunder-claps.

O hapless race of men, when that they charged the gods with such acts and coupled with them bitter wrath! what groanings did they then beget for themselves, what wounds for us, what tears for our posterity! Nor is it any act of piety to be often seen with veiled head to turn to a stone and approach every altar and fall prostrate on the ground and to spread out the palms before the statues of the gods and sprinkle the altars with much blood of beasts and nail up vow after vow, but rather to be able to look on all things with a mind at peace. For when we turn our gaze on the heavenly quarters of the great upper world and ether fast above the glittering stars, and direct our thoughts to the courses of the

tunc aliis oppressa malis in pectora cura
 illa quoque expergefactum caput erigere infit,
 nequae forte deum nobis inmensa potestas
 sit, vario motu quae candida sidera verset. 1210
 temptat enim dubiam mentem rationis egestas,
 ecquaenam fuerit mundi genitalis origo,
 et simul ecquae sit finis, quoad moenia mundi
 solliciti motus hunc possint ferre laborem,
 an divinitus aeterna donata salute 1215
 perpetuo possint aevi labentia tractu
 inmensi validas aevi contemnere viris.
 praeterea cui non animus formidine divum
 contrahitur, cui non correpunt membra pavore,
 fulminis horribili cum plaga torrida tellus 1220
 contremat et magnum percurrunt murmura caelum?
 non populi gentesque tremunt, regesque superbi
 corripunt divum percussi membra timore,
 nequid ob admissum foede dictumve superbe
 poenarum grave sit solvendi tempus adultum? 1225
 summa etiam cum vis violenti per mare venti
 induperatorem classis super aequora verrit
 cum validis pariter legionibus atque elephantis,
 non divom pacem votis adit ac prece quaesit

sun and moon, then into our breasts burdened with other ills that fear
 as well begins to exalt its reawakened head, the fear that we may haply
 find the power of the gods to be unlimited, able to wheel the bright stars
 in their varied motion; for lack of power to solve the question troubles
 the mind with doubts, whether there was ever a birth-time of the world,
 and whether likewise there is to be any end; how far the walls of the
 world can endure this strain of restless motion; or whether gifted by
 the grace of the gods with an everlasting existence they may glide on
 through a never-ending tract of time and defy the strong powers of im-
 measurable ages. Again who is there whose mind does not shrink into
 itself with fear of the gods, whose limbs do not cower in terror, when
 the parched earth rocks with the appalling stroke and rattlings run
 through the great heaven? Do not peoples and nations quake, and proud
 monarchs shrink into themselves smitten with fear of the gods, lest for
 any foul transgression or overweening word the heavy time of reckoning
 has arrived at its fulness? When too the utmost fury of the headstrong
 wind passes over the sea and sweeps over its waters the commander of
 a fleet together with his mighty legions and elephants, does he not
 solicit with vows the mercy of the gods and ask in prayer with fear and

ventorum pavidus paces animasque secundas, 1230
nequiquam, quoniam violento turbine saepe
correptus nilo fertur minus ad vada leti?

usque adeo res humanas vis abdita quaedam
opiterit et pulchros fascis saevasque secures
proculcare ac ludibrio sibi habere videtur. 1235

denique sub pedibus tellus cum tota vacillat
concussaeque cadunt urbes dubiaeque minantur,
quid mirum si se temnunt mortalia saecula
(atque potestatis magnas mirasque relinquunt
in rebus viris divum, quae cuncta gubernent?) 1240

Quod superest, aes atque aurum ferrumque repertumst
et simul argenti pondus plumbique potestas,
ignis ubi ingentis silvas ardore cremarat
montibus in magnis, ceu caeli fulmine misso,
sive quod inter se bellum silvestre gerentes 1245


hostibus intulerant ignem formidinis ergo,
sive quod inducti terrae bonitate volebant
pandere agros pinguis et pascua reddere rura,
sive feras interficere et ditescere praeda.
nam fovea atque igni prius est venarier ortum 1250
quam saepire plagis saltum canibusque ciere.

trembling a lull in the winds and propitious gales; but all in vain, since often caught up in the furious hurricane he is borne none the less to the shoals of death? so constantly does some hidden power trample on human grandeur and is seen to tread under its heel and make sport for itself of the renowned rods and cruel axes. Again when the whole earth rocks under their feet and towns tumble with the shock or doubtfully threaten to fall, what wonder that mortal men abase themselves and make over to the gods in things here on earth high prerogatives and marvellous powers, sufficient to govern all things?


To proceed, copper and gold and iron were discovered and at the same time weighty silver and the substance of lead, when fire had burnt up vast forests on the large mountains, either by a discharge of heaven's lightning, or else because men waging with one another a forest-war had carried fire among the enemy in order to strike terror, or because drawn on by the goodness of the soil they would wish to clear rich fields and bring the country into pasture, or else to destroy wild-beasts and enrich themselves with the booty; for hunting with the pitfall and with fire came into use before the practice of enclosing the lawn with toils and starting the game with dogs. Whatever the fact is, from whatever cause

quidquid id est, quacumque e causa flammeus ardor
 horribili sonitu silvas exederat altis
 ab radicibus et terram percoxerat igni,
 manabat venis ferventibus in loca terrae 1255
 concava conveniens argenti rivus et auri,
 aeris item et plumbi. quae cum concreta videbant
 posterius claro in terra splendere colore,
 tollebant nitido capti levique lepore
 et simili formata videbant esse figura 1260
 atque lacunarum fuerant vestigia cuique.
 tum penetrabat eos posse haec liquefacta calore
 quamlibet in formam et faciem decurrere rerum
 et prorsum quamvis in acuta ac tenvia posse
 mucronum duci fastigia procudendo, 1265
 ut sibi tela darent, silvasque ut caedere possent
 materiemque dolare et levia radere tigna
 et terebrare etiam ac pertundere perque forare.
 nec minus argento facere haec auroque parabant
 quam validi primum violentis viribus aeris, 1270
 nequiquam, quoniam cedebat victa potestas
 nec poterat pariter durum sufferre laborem.
 tum fuit in pretio magis *aes* aurumque iacebat
 propter inutilitatem hebeti mucrone retusum.

the heat of flame had swallowed up the forests with a frightful crackling from their very roots and had thoroughly baked the earth with fire, there would run from the boiling veins and collect into the hollows of the ground a stream of silver and gold, as well as of copper and lead. And when they saw these afterwards cool into lumps and glitter on the earth with a brilliant gleam, they would lift them up attracted by the bright and polished lustre, and they would see them to be moulded in a shape the same as the outline of the cavities in which each lay. Then it would strike them that these might be melted by heat and cast in any form or shape soever, and might by hammering out be brought to tapering points of any degree of sharpness and fineness, so as to furnish them with tools and enable them to cut the forests and hew timber and plane smooth the planks, and also to drill and pierce and bore. And they would set about these works just as much with silver and gold at first as with the overpowering strength of stout copper, but in vain, since their force would fail and give way and not be able like copper to stand the severe strain. At that time copper was in higher esteem and gold would lie neglected on account of its uselessness, with its dull blunted edge: now copper

nunc iacet aes, aurum in summum successit honorem. 1275
 sic volvenda aetas commutat tempora rerum.
 quod fuit in pretio, fit nullo denique honore;
 porro aliut succedit et e contemptibus exit
 inque dies magis adpetitur floretque repertum
 laudibus et miro est mortalis inter honore. 1280 

Nunc tibi quo pacto ferri natura reperta
 sit facilest ipsi per te cognoscere, Memmi.
 arma antiqua manus ungues dentesque fuerunt
 et lapides et item silvarum fragmina rami,
 et flamma atque ignes, postquam sunt cognita primum. 1285
 posterius ferri vis est aerisque reperta.
 et prior aeris erat quam ferri cognitus usus,
 quo facilis magis est natura et copia maior.
 aere solum terrae tractabant, aereque belli
 miscebant fluctus et vulnera vasta serebant 1290
 et pecus atque agros adimebant; nam facile ollis
 omnia cedebant armatis nuda et inerma.
 inde minutatim processit ferreus ensis
 (versaue in obprobrium species est falcis ahenae,
 et ferro coepere solum proscindere terrae 1295
 exaequataque sunt creperi certamina belli.

lies neglected, gold has mounted up to the highest place of honour. Thus time as it goes round changes the seasons of things. That which was in esteem, falls at length into utter disrepute; and then another thing mounts up and issues out of its degraded state and every day is more and more coveted and blossoms forth high in honour when discovered and is in marvellous repute with men. 

And now, Memmius, it is easy for you to find out by yourself in what way the nature of iron was discovered. Arms of old were hands nails and teeth and stones and boughs broken off from the forests, and flame and fire, as soon as they had become known. Afterwards the force of iron and copper was discovered; and the use of copper was known before that of iron, as its nature is easier to work and it is found in greater quantity. With copper they would labour the soil of the earth, with copper stir up the billows of war and deal about wide-gaping wounds and seize cattle and lands; for every thing defenceless and unarmed would readily yield to them with arms in hand. Then by slow steps the sword of iron gained ground and the make of the copper sickle became a byword; and with iron they began to plough through the earth's soil, and the struggles of wavering war were rendered equal. And the custom

et prius est armatum in equi conscendere costas
et moderarier hunc frenis dextraque vigere
quam biiugo curru belli temptare pericla.
et biiugos prius est quam bis coniungere binos 1300
et quam falciferos armatum escendere curru.
inde boves *lucas* turrito corpore, taetras,
anguimane, belli docuerunt volnera Poeni
sufferre et magnas Martis turbare catervas.
sic alid ex alio peperit discordia tristis, 1305
horribile humanis quod gentibus esset in armis,
inque dies belli terroribus addidit augmen.

Temptarunt etiam tauros in moenere belli
expertique sues saevos sunt mittere in hostis.
et validos partim prae se misere leones 1310
cum doctoribus armatis saevisque magistris
qui moderarier his possent vinclisque tenere,
nequiquam, quoniam permixta caede calentes
turbabant saevi nullo discrimine turmas,
TERRIFICAS CAPITUM QUATIENTES UNDIQUE CRISTAS ?? 1315
nec poterant equites fremitu perterrita equorum
pectora mulcere et frenis convertere in hostis.
inritata leae iaciebant corpora saltu
undique et adversum venientibus ora petebant
et nec opinantis a tergo deripiebant 1320

of mounting in arms on the back of a horse and guiding him with reins and shewing prowess with the right hand is older than that of tempting the risks of war in a two-horsed chariot; and yoking a pair of horses is older than yoking four or mounting in arms scythed chariots. Next the Poeni taught the lucan kine with towered body, hideous of aspect, with snake-like hand, to endure the wounds of war and to disorder the mighty ranks of Mars. Thus sad discord begat one thing after another, to affright nations of men under arms, and every day made some addition to the terrors of war.

They made trial of bulls too in the service of war and essayed to send savage boars against the enemy. And some sent before them valorous lions with armed trainers and courageous keepers to guide them and to hold them in chains; but in vain, since heated with promiscuous slaughter they would disorder in their rage the troops without distinction; and the horsemen were not able to calm the breasts of the horses scared by the roaring and turn them with the bridle upon the enemy. The lionesses with a spring would throw their enraged bodies on all sides and would attack in the face those who met them and others off their guard they

deplexaeque dabant in terram volnere victos,
 morsibus adfixae validis atque unguibus uncis.
 iactabantque suos tauri pedibusque terebant
 et latera ac ventres hauribant sup̄ter equorum
 cornibus et terram minitanti fronte ruebant. 1325
 et validis socios caedebant dentibus apri
 tela infracta suo tinguentes sanguine saevi,
 in se fracta suo tinguentes sanguine tela,
 permixtasque dabant equitum peditumque ruinas.
 nam transversa feros exhibant dentis adactūs 1330
 iumenta aut pedibus ventos erecta petebant,
 nequiquam, quoniam ab nervis succisa videres
 concidere atque gravi terram consternere casu.
 siquos ante domi domitos satis esse putabant,
 effervescere cernebant in rebus agundis 1335
 volneribus clamore fuga terrore tumultu,
 nec poterant ullam partem reducere eorum;
 diffugiebat enim varium genus omne ferarum;
 ut nunc saepe boves lucae ferro male mactae
 diffugiunt, fera fata suis cum multa dedere. 1340
 SI FUIT UT FACERENT SED VIX ADDUCOR UT ANTE
 NON QUIERINT ANIMO PRAESENTIRE ATQUE VIDERE
 QUAM COMMUNE MALUM FIERET FOEDUMQUE FUTURUM
 ET MAGIS ID POSSIS FACTUM CONTENDERE IN OMNI

would tear down from behind and twining round them would bring them to the ground overpowered by the wound, fastening on them with firm bite and with hooked claws. The bulls would toss their own friends and trample them under foot, and gore with their horns the flanks and bellies of the horses underneath and turn up the earth with threatening front. The boars too would rend their friends with powerful tusks, in their rage dying with their blood the weapons broken in them, dying with their blood I say the weapons broken in their own bodies; and would put to promiscuous rout horse and foot; for the tame beasts would try to avoid by shying to the side the cruel push of the tusk, or would rear up and paw the winds, all in vain, since you might see them tumble down with their tendons severed and straw the ground in their heavy fall. Those whom they believed before to have been sufficiently broken in already, they would see lash themselves into fury in the heat of action from wounds, shouting, flight panic uproar; and they could not rally any portion of them; for all the different kinds of wild-beasts would fly all abroad; just as now the lucan kine when cruelly mangled by the sword fly often all abroad, after inflicting on their friends many cruel deaths.

IN VARIIS MUNDIS VARIA RATIONE CREATIS 1345

QUAM CERTO ATQUE UNO TERRARUM QUOLIBET ORBI
sed facere id non tam vincendi spe voluerunt,
quam dare quod gement hostes, ipsique perire,
qui numero diffidebant armisque vacabant.

Nexilis ante fuit vestis quam textile tegmen. 1350

textile post ferrumst, quia ferro tela paratur,
nec ratione alia possunt tam levia gigni
insilia ac fusi radii scapique sonantes.
et facere ante viros lanam natura coegit
quam muliebre genus; nam longe praestat in arte 1355
et sollertius est multo genus omne virile;
agricolae donec vitio vertere severi,
ut muliebribus id manibus concedere vellent
atque ipsi pariter durum sufferre laborem
atque opere in duro durarent membra manusque. 1360

At specimen sationis et insitionis origo
ipsa fuit rerum primum natura creatrix,
arboribus quoniam bacae glandesque caducae
(tempestitiva dabant pullorum examina sup̄ter;
unde etiam libitumst stirpis committere ramis 1365
et nova defodere in terram virgulta per agros.
inde aliam atque aliam culturam dulcis agelli

But men chose thus to act not so much in any hope of victory, as from a wish to give the enemy something to rue at the cost of their own lives, when they mistrusted their numbers and were in want of arms.

A garment tied on the body was in use before a dress of woven stuff. Woven stuff comes after iron, because the loom is fitted with iron; and in no other way can such finely polished things be made, as heddles and spindles, shuttles and ringing yarn-beams. And nature impelled men to work up the wool before womankind: for the male sex in general far excels the other in skill and is much more ingenious: until the rugged countrymen so upbraided them with it, that they were glad to give it over into the hands of the women and take their share in supporting hard toil, and in such hard work hardened body and hands.

But nature parent of things was herself the first model of sowing and first gave rise to grafting, since berries and acorns dropping from the trees would put forth in due season swarms of young shoots underneath; and hence also came the fashion of inserting grafts in their stocks and planting in the ground young saplings over the fields. Next they would try another and yet another kind of tillage for their loved piece of land

temptabant fructusque feros mansuescere terram
 cernebant indulgendo blandeque colendo.
 inque dies magis in montem succedere silvas 1370
 cogeabant infraque locum concedere cultis,
 prata lacus rivos segetes vinetaque laeta
 collibus et campis ut haberent, atque olearum
 caerula distinguens inter plaga currere posset,
 per tumulos et convallis camposque profusa; 1375
 ut nunc esse vides vario distincta lepore
 omnia, quae pomis intersita dulcibus ornant
 arbustisque tenent felicibus opsita circum.

At liquidas avium voces imitauer ore
 ante fuit multo quam levia carmina cantu 1380
 concelebrare homines possent aurisque iuvare.
 et zephyri, cava per calamorum, sibila primum
 agrestis docuere cavas inflare cicutas.
 inde minutatim dulcis didicere querellas,
 tibia quas fundit digitis pulsata canentum, 1385
 avia per nemora ac silvas saltusque reperta,
 per loca pastorum deserta atque otia dia.
 haec animos ollis mulcebant atque iuvabant 1390
 cum satiate cibi; nam tum *haec* sunt omnia cordi.
 saepe itaque inter se prostrati in gramine molli

and would see the earth better the wild fruits through genial fostering and kindly cultivation. And they would force the forests to recede every day higher and higher up the hill-side and yield the ground below to tilth, in order to have on the uplands and plains meadows tanks runnels cornfields and glad vineyards, and allow a green strip of olives to run between and mark the divisions, spreading itself over hillocks and valleys and plains; just as you now see richly dight with varied beauty all the ground which they lay out and plant with rows of sweet fruit-trees and enclose all round with plantations of other goodly trees.

But imitating with the mouth the clear notes of birds was in use long before men were able to sing in tune smooth-running verse and give pleasure to the ear. And the whistlings of the zephyr through the hollows of reeds first taught peasants to blow into hollow stalks. Then step by step they learned sweet plaintive ditties, which the pipe pours forth pressed by the fingers of the players, heard through pathless woods and forests and lawns, through the unfrequented haunts of shepherds and abodes of unearthly calm. These things would soothe and gratify their minds when sated with food; for then all things of this kind are welcome. Often therefore stretched in groups on the soft grass beside

propter aquae rivom sub ramis arboris altae
 non magnis opibus iucunde corpora habebant,
 praesertim cum tempestas ridebat et anni 1395
 tempora pingebant viridantis floribus herbas.
 tum ioca, tum sermo, tum dulces esse cachinni
 consuerant. agrestis enim tum musa vigebat;
 tum caput atque umeros plexis redimire corònis
 floribus et foliis lascivia laeta monebat, 1400
 atque extra numerum procedere membra moventes
 duriter et duro terram pede pellere matrem;
 unde oriebantur risus dulcesque cachinni,
 omnia quod nova tum magis haec et mira vigebant.
 et vigilantibus hinc aderant solacia somni, 1405
 ducere multimodis voces et flectere cantus
 et supra calamos unco percurrere labro;
 unde etiam vigiles nunc haec accepta tuentur
 et numerum servare recens didicere, neque hilo
 maiorem interea capiunt dulcedini' fructum 1410
 quam silvestre genus capiebat terrigenarum.
 nam quod adest praesto, nisi quid cognovimus ante
 suavius, in primis placet et pollere videtur,
 posteriorque fere melior res illa reperta
 perdit et immutat sensus ad pristina quaeque. 1415

a stream of water under the boughs of a high tree at no great cost they would pleasantly refresh their bodies, above all when the weather smiled and the seasons of the year painted the green grass with flowers. Then went round the jest, the tale, the peals of merry laughter; for the peasant muse was then in its glory; then frolic mirth would prompt to entwine head and shoulders with garlands plaited with flowers and leaves, and to advance in the dance out of step and move the limbs clumsily and with clumsy foot beat mother earth; which would occasion smiles and peals of merry laughter, because all these things then from their greater novelty and strangeness were in high repute. And the wakeful found a solace for want of sleep in this, in drawing out a variety of notes and going through tunes and running over the reeds with curving lip; whence even at the present day watchmen observe these traditions and have lately learned to keep the proper tune; and yet for all this receive not a jot more of enjoyment, than erst the rugged race of sons of earth received. For that which we have in our hands, if we have known before nothing pleasanter, pleases above all and is thought to be the best; and as a rule the later discovery of something better spoils the taste for the former things and changes the feelings in regard to all that

sic odium coepit glandis, sic illa relictā
 strata cubilia sunt herbis et frondibus aucta.
 pellis item cecidit vestis contempta ferinae;
 quam reor invidia tali tunc esse repertam,
 ut letum insidiis qui gessit primus obiret, 1420
 et tamen inter eos distractam sanguine multo
 disperiisse neque in fructum convertere quisse.
 tunc igitur pelles, nunc aurum et purpura curis
 exercent hominum vitam belloque fatigant;
 quo magis in nobis, ut opinor, culpa resedit. 1425
 frigus enim nudos sine pellibus excruciat
 terrigenas; at nos nil laedit veste carere
 purpurea atque auro signisque ingentibus apta,
 dum plebeia tamen sit quae defendere possit.
 ergo hominum genus incassum frustra laborat 1430
 semper et *in* curis consumit inanibus aevom,
 nimirum quia non cognovit quae sit habendi
 finis et omnino quoad crescat vera voluptas.
 idque minutatim vitam provexit in altum
 et belli magnos commovit funditus aestus. 1435
 At vigiles mundi magnum versatile templum
 sol et luna suo lustrantes lumine circum

has gone before. Thus began distaste for the acorn, thus were abandoned those sleeping-places strawn with grass and enriched with leaves. The dress too of wild-beasts' skin fell into neglect; though I can fancy that in those days it was found to arouse such jealousy that he who first wore it met his death by an ambushade, and after all it was torn in pieces mid the crowd and drenched in blood was utterly destroyed and could not be turned to any use. In those times therefore skins, now gold and purple plague men's lives with cares and wear them out with war. And in this methinks the greater blame rests with us; for cold would torture the naked sons of earth without their skins; but us it harms not in the least to do without a robe of purple, spangled with gold and large figures, if only we have a dress of the people to protect us. Mankind therefore ever toils vainly and to no purpose and wastes life in groundless cares, because sure enough he has not learnt what is the true end of getting and up to what point genuine pleasure goes on increasing: this by slow degrees has carried life out into the deep sea and stirred up from their lowest depths the mighty billows of war.

But those watchful guardians sun and moon traversing with their light all round the great revolving sphere of heaven taught men that the

perdocuere homines annorum tempora verti
et certa ratione geri rem atque ordine certo.

Iam validis saepti degebant turribus aevom 1440
et divisa colebatur discretaque tellus,
iam mare velivolis florebat puppibus; urbes
auxilia ac socios iam pacto foedere habebant,
carminibus cum res gestas coepere poetae
tradere; nec multo priu' sunt elementa reperta. 1445
propterea quid sit prius actum respicere aetas
nostra nequit, nisi qua ratio vestigia monstrat.

Navigia atque agri culturas moenia leges
arma vias vestes *et* cetera de genere horum,
praemia, delicias quoque vitae funditus omnis, 1450
carmina picturas, et daedala signa polire,
usus et impigrae simul experientia mentis
paulatim docuit pedetemtum progredientis.
sic unumquicquid paulatim protrahit aetas
in medium ratioque in luminis erigit oras. 1455
namque alid ex alio clarescere et ordine debet
artibus, ad summum donec venere cacumen.

seasons of the year came round and that the system was carried on after a fixed plan and fixed order.

Already they would pass their life fenced about with strong towers, and the land, portioned out and marked off by boundaries, be tilled; the sea would be filled with ships scudding under sail; towns have auxiliaries and allies as stipulated by treaty, when poets began to consign the deeds of men to verse; and letters had not been invented long before. For this reason our age cannot look back to what has gone before, save where reason points out any traces.

Ships and tillage, walls, laws, arms, roads, dress and all such like things, all the prizes, all the elegancies too of life without exception, poems, pictures, and the chiselling fine-wrought statues, all these things practice together with the acquired knowledge of the untiring mind taught men by slow degrees as they advanced on the way step by step. Thus time by degrees brings each several thing forth before men's eyes and reason raises them up into the borders of light; for things must be brought to light one after the other and in due order in the different arts, until these have reached their highest point of development.

T. LUCRETI CARI
DE RERUM NATURA

LIBER SEXTUS

Primae frugiparos fetus mortalibus aegris
dididerunt quondam praeclaro nomine Athenae
et recreaverunt vitam legesque rogarunt,
et primae dederunt solacia dulcia vitae,
cum genuere virum tali cum corde repertum, 5
omnia veridico qui quondam ex ore profudit;
cuius et extincti propter divina reperta
divolgata vetus iam ad caelum gloria fertur.
nam cum vidit hic ad victum quae flagitat usus
omnia iam ferme mortalibus esse parata 10
et, proquam possit, vitam consistere tutam,
divitiis homines et honore et laude potentis
affluere atque bona gnatorum excellere fama,
nec minus esse domi cuiquam tamen anxia corda,
atque animi ingratis vitam vexare *sine ulla* 15

In days of yore Athens of famous name first imparted corn-producing crops to suffering mankind, and modelled life anew and passed laws; and first too bestowed sweet solaces of existence, when she gave birth to a man who shewed himself gifted with such a genius and poured forth all knowledge of old from his truth-telling mouth; whose glory, even now that he is dead, on account of his godlike discoveries confirmed by length of time is spread abroad among men and reaches high as heaven. For when he saw that the things which life imperiously demands for its subsistence, had all without exception been already provided for men, and that life, so far as was possible, was placed on a sure footing, that men were great in affluence of riches and honours and glory and swelled with pride in the high reputation of their children, and yet that none of them at home for all that had a heart the less disquieted, and that it in despite of the mind plagued life without any respite and was

pausa atque infestis cogeī saevire querellis,
 intellegit ibi vitium vas efficere ipsum
 omniaque illius vitio corrumpier intus
 quae conlata foris et commoda cumque venirent;
 partim quod fluxum pertusumque esse videbat, 20
 ut nulla posset ratione explerier umquam;
 partim quod taetro quasi conspurcare sapore
 omnia cernebat, quaecumque receperat, intus.
 veridicis igitur purgavit pectora dictis
 et finem statuit cuppedinis atque timoris 25
 exposuitque bonum summum quo tendimus omnes
 quid foret, atque viam monstravit, tramite parvo
 qua possemus ad id recto contendere cursu,
 quidve mali foret in rebus mortalibu' passim,
 quod fieret naturali varieque volaret 30
 seu casu seu vi, quod sic natura parasset,
 et quibus e portis occurri cuique deceret,
 et genus humanum frustra plerumque probavit
 volvere curarum tristis in pectore fluctus.
 nam veluti pueri trepidant atque omnia caecis 35
 in tenebris metuunt, sic nos in luce timemus
 interdum, nilo quae sunt metuenda magis quam
 quae pueri in tenebris pavitant finguntque futura.

constrained to rave with distressful complainings, he then perceived that the vessel itself did cause the corruption and that by its corruption all the things that came into it and were gathered together from abroad however salutary, were spoilt within it; partly because he saw it to be leaky and full of holes so that it could never by any means be filled full; partly because he perceived that it befouled so to say with a nauseous flavour everything within it, which it had taken in. He therefore cleansed men's breasts with truth-telling precepts and fixed a limit to lust and fear and explained what was the chief good which we all strive to reach, and pointed out the road by which along a narrow track we might arrive at it in a straightforward course; he shewed too what evils existed in mortal affairs throughout, rising up and manifoldly flying about by a natural—call it chance or force, because nature had so brought it about; and from what gates you must sally out duly to encounter each; and he proved that mankind mostly without cause arouse in their breast the melancholy tumbling billows of cares. For even as children are flurried and dread all things in the thick darkness, thus we in the daylight fear at times things not a whit more to be dreaded than what children shudder at in the dark and fancy sure to be. This terrour

hunc igitur terrorem animi tenebrasque necessest
 non radii solis nec lucida tela diei 40
 discutiant, sed naturae species ratioque.
 quo magis inceptum pergam pertexere dictis.

Et quoniam docui mundi mortalia templa
 esse *et* nativo consistere corpore caelum,
 et quaecumque in eo fiunt fierique necessest, 45
 pleraque ressortui, quae restant percipe porro,
 quandoquidem semel insignem conscendere currum
 ‡

ventorum, ex ira ut placentur, *ut* omina rursum
 quae fuerint sint placato conversa furore:
 cetera quae fieri in terris caeloque tuentur 50
 mortales, pavidis cum pendent mentibu' saepe,
 et faciunt animos humilis formidine divom
 depressosque premunt ad terram propterea quod
 ignorantia causarum conferre deorum
 cogit ad imperium res et concedere regnum, 55
 nam bene qui didicere deos securum agere aevom,
 si tamen interea mirantur qua ratione

therefore and darkness of mind must be dispelled not by the rays of the sun and glittering shafts of day, but by the aspect and law of nature. Wherefore the more readily I will go on in my verses to complete the web of my design.

And since I have shewn that the quarters of ether are mortal and that heaven is formed of a body that had a birth, and since of all the things which go on and must go on in it, I have unravelled most, hear further what remains to be told; since once for all [I have willed] to mount the illustrious chariot [of the muses, and ascending to heaven to explain the true law of winds and storms, which men foolishly lay to the charge of the gods, telling how when they are angry, they raise fierce tempests; and, when there is a lull in the fury] of the winds, how that anger is appeased, how the omens which have been, are again changed when their fury has thus been appeased: [I have willed at the same time] to explain all the other things which mortals observe to go on upon earth and in heaven, when often they are in anxious suspense of mind, and which abase their souls with fear of the gods and weigh and press them down to earth, because ignorance of the causes constrains them to submit things to the empire of the gods and to make over to them the kingdom. For they who have been rightly taught that the gods lead a life without care, if nevertheless they wonder on what plan

quaeque geri possint, praesertim rebus in illis 60
 quae supera caput aetheriis cernuntur in oris,
 rursus in antiquas referuntur religionis
 et dominos acris adsciscunt, omnia posse
 quos miseri credunt, ignari quid queat esse,
 quid nequeat, finita potestas denique cuique 65
 quam sit rationi atque alte terminus haerens;
 quo magis errantes caeca ratione feruntur.
 quae nisi respuis ex animo longeque remittis
 dis indigna putare alienaque pacis eorum,
 delibata deum per te tibi numina sancta 70
 saepe oberunt; non quo violari summa deum vis
 possit, ut ex ira poenas petere inbibat acris,
 sed quia tute tibi placida cum pace quietos
 constitues magnos irarum volvere fluctus,
 nec delubra deum placido cum pectore adibis, 75
 nec de corpore quae sancto simulacra feruntur
 in mentes hominum divinae nuntia formae,
 suscipere haec animi tranquilla pace valebis.
 inde videre licet qualis iam vita sequatur.
 quam quidem ut a nobis ratio verissima longe 80
 reiciat, quamquam sunt a me multa profecta,

all things can be carried on, above all in regard to those things which are seen overhead in the ethereal borders, are borne back again into their old religious scruples and take unto themselves hard taskmasters, whom they poor wretches believe to be almighty, not knowing what can, what cannot be, in short on what principle each thing has its powers defined, its deep-set boundary mark; for which reason they are led all the farther astray by blind reason. Now unless you drive from your mind with loathing all these things, and banish far from you all belief in things degrading to the gods and inconsistent with their peace, then often will the holy deities of the gods, having their majesty lessened by you, do you hurt; not that the supreme power of the gods can be outraged, so as in their wrath to resolve to exact sharp vengeance, but because you will fancy to yourself that they, though they enjoy quiet and calm peace, do roll great billows of wrath; nor will you approach the sanctuaries of the gods with a calm breast nor will you be able with tranquil peace of mind to take in those idols which are carried from their holy body into the minds of men, as heralds of their divine form. And what kind of life follows after this, may be conceived. But in order that most veracious reason may drive it far away from us, though much has already gone forth from me, much

multa tamen restant et sunt ornanda politis
 versibus; est ratio caeli *speciesque* tenenda,
 sunt tempestates et fulmina clara canenda,
 quid faciant et qua de causa cumque ferantur; 85
 ne trepides caeli divisis partibus amens,
 unde volans ignis pervenerit aut in utram se
 verterit hinc partim, quo pacto per loca saepta
 insinuarit, et hinc dominatus ut extulerit se.
 tu mihi supremæ praescripta ad candida calcis 92
 currenti spatium praemonstra, callida musa
 Calliope, requies hominum divomque voluptas,
 te duce ut insigni capiam cum laude coronam. 95
 Principio tonitru quatiuntur caerula caeli
 propterea quia concurrunt sublime volantes
 aetheriae nubes contra pignantibu' ventis.
 nec fit enim sonitus caeli de parte serena,
 verum ubicumque magis denso sunt agmine nubes, 100
 tam magis hinc magno fremitus fit murmure saepe.
 praeterea neque tam condenso corpore nubes
 esse queunt quam sunt lapides ac tigna, neque autem
 tam tenues quam sunt nebulae fumique volantes;
 nam cadere aut bruto deberent pondere pressae 105

however still remains and has to be embellished in smooth-polished verses; the law and aspect of heaven has to be apprehended; storms and bright lightnings, what they do and from what cause they are borne along, all this has to be sung; that you may not mark out the heaven into quarters and be startled and distracted on seeing from which of them the volant fire has come or to which of the two halves it has betaken itself, in what way it has gained an entrance within walled places, and how after lording it with tyrant sway it has extricated itself from these. Do thou, deft muse Calliope, solace of men and joy of gods, point out the course before me as I race to the white boundary-line of the final goal, that under thy guidance I may win the crown with signal applause.

In the first place the azure heights of heaven are shaken with thunder, because the ethereal clouds clash together as they fly aloft when the winds combat from opposite quarters. For no sound ever comes from a cloudless part of heaven, but wheresoever the clouds are gathered in a denser mass, from that part with greater frequency comes a clap with a loud growl. Again clouds cannot be either of so dense a body as stones and timbers, nor again so fine as mists and flying bodies of smoke; for then they must either fall borne down by their dead

ut lapides, aut ut fumus constare nequirent
 nec cohibere nives gelidas et grandinis imbris.
 dant etiam sonitum patuli super aequora mundi,
 carbasus ut quondam magnis intenta theatris
 dat crepitum malos inter iactata trabesque, 110
 interdum perscissa furit petulantibus auris
 et fragilis *sonitus* chartarum commeditatur.
 id quoque enim genus in tonitru cognoscere possis,
 aut ubi suspensam vestem chartasve volantis
 verberibus venti versant planguntque per auras. 115
 fit quoque enim interdum *ut* non tam concurrere nubes
 frontibus adversis possint quam de latere ire
 diverso motu radentes corpora tractim,
 aridus unde auris terget sonus ille diuque
 ducitur, exierunt donec regionibus artis. 120

Hoc etiam pacto tonitru concussa videntur
 omnia saepe gravi tremere et divolsa repente
 maxima dissiluisse capacis moenia mundi,
 cum subito validi venti conlecta procella
 nubibus intorsit sese conclusaque ibidem 125
 turbine versanti magis ac magis undique nubem

weight like stones, or like smoke they would be unable to keep together and hold within frozen snows and hail-showers. They also give forth a sound over the levels of the wide-stretching upper world, just as at times a canvas-awning stretched over large theatres makes a creaking noise, when it tosses about among the poles and beams; sometimes too rent by the boisterous gales it madly howls and closely imitates the crackling noise of pieces of paper: this kind of noise too you may notice in thunder, when the winds whirl about with their blows and buffet through the air a hanging cloth or flying bits of paper. For sometimes too the clouds cannot meet front to front in direct collision, but must rather move from the flank and so with contrary motions graze leisurely along each other's bodies; whence comes that dry sound which brushes the ears and is long drawn out, until they have made their way out of their confined positions.

In this way also all things appear to quake often from the shock of heavy thunder, and the mighty walls of the far-stretching ether seem in an instant to have been riven and to have sprung asunder; when a storm of violent wind has suddenly gathered and worked itself into the clouds and, there shut in, with its whirling eddy ever more and more on all sides forces the cloud to become hollow with a thick surrounding

cogit uti fiat spisso cava corpore circum,
 post ubi conminuit vis eius et impetus acer,
 tum perterricrepto sonitu dat scissa fragorem.
 nec mirum, cum plena animae vensicula parva 130
 saepe ita dat magnum sonitum displosa repente.

Est etiam ratio, cum venti nubila perflant,
 ut sonitus faciant. etenim ramosa videmus
 nubila saepe modis multis atque aspera ferri;
 scilicet ut, crebram silvam cum flamina cauri 135
 perflant, dant sonitum frondes ramique fragorem.
 fit quoque ut interdum validi vis incita venti
 perscindat nubem perfringens impete recto.
 nam quid possit ibi flatus manifesta docet res,
 hic, ubi lenior est, in terra cum tamen alta 140
 arbusta evolvens radicibus haurit ab imis.
 sunt etiam fluctus per nubila, qui quasi murmur
 dant in frangendo graviter; quod item fit in altis
 fluminibus magnoque mari, cum frangitur aestus.
 fit quoque, ubi e nubi in nubem vis incidit ardens 145
 fulminis, haec multo si forte umore recepit
 ignem, continuo *ut* magno clamore trucidet;
 ut calidis candens ferrum e fornacibus olim

crust of body; afterwards when its force and impetuous onset has split it, then the cloud thus rent gives forth a crash with a hideous hurtling noise. And no wonder, since a small bladder filled with air often emits a great sound if suddenly burst.

It can also be explained how the winds, when they blow through the clouds, make noises: we see branching and rough clouds often borne along in many ways; thus, you are to know, when the blasts of the northwest blow through a dense forest, the leaves give forth a rustling and the boughs a crashing. Sometimes too the force of the strong wind when aroused rends the cloud, breaking through it by an assault right in front: what a blast of wind can do there, is shewn by facts plain to sense, when here on earth where it is gentler it yet twists out tall trees and tears them up from their deepest roots. There are also waves among the clouds and they give a kind of roar as they break heavily; just as in deep rivers and on the great sea when the surf breaks. Sometimes too when the burning force of thunder has fallen out of one cloud into another, if haply the latter contains much moisture when it has taken the fire into it, it drowns it at once with a loud noise; just so iron glowing hot from the fiery furnaces sometimes hisses, when we have

stridit, ubi in gelidum propere demersimus imbrem.
 aridior porro si nubes accipit ignem, 150
 uritur ingenti sonitu succensa repente;
 lauricomos ut si per montis flamma vagetur
 turbine ventorum comburens impete magno;
 nec res ulla magis quam Phoebi Delphica laurus
 terribili sonitu flamma crepitante crematur. 155
 denique saepe geli multus fragor atque ruina
 grandinis in magnis sonitum dat nubibus alte.
 ventus enim cum confercit, franguntur, in artum,
 concreti montes nimborum et grandine mixti.

Fulgit item, nubes ignis cum semina multa 160
 excussere suo concursu; ceu lapidem si
 percutiat lapis aut ferrum; nam tum quoque lumen
 exilit et claras scintillas dissipat ignis.
 sed tonitrum fit uti post auribus accipiamus,
 fulgere quam cernant oculi, quia semper ad auris 165
 tardius adveniunt quam visum quae moveant res.
 id licet hinc etiam cognoscere: caedere si quem
 ancipiti videas ferro procul arboris auctum,
 ante fit ut cernas ictum quam plaga per auris
 det sonitum; sic fulgorem quoque cernimus ante 170

plunged it quickly into cold water. Again if the cloud which receives the fire is drier, it is set on fire in an instant and burns with a loud noise; just as if a flame should range over the laurel-covered hills through a whirlwind and burn them up with its impetuous assault; and there is not anything that burns in the crackling flame with a more startling sound than the Delphic laurel of Phoebus. Then often too much crushing of ice and tumbling in of hail make a noise in the great clouds on high; for when the wind packs them together into a confined space, the mountains of storm-clouds congealed and mixed with hail break up.

It lightens too, when the clouds have struck out by their collision many seeds of fire; just as if a stone were to strike another stone or a piece of iron; for then too light bursts out and fire scatters about many sparks. But we hear the thunder with our ears after the eyes see the flash of lightning, because things always travel more slowly to the ears than those which excite vision travel to the eyes. This you may perceive from the following instance too: when you see a man at a distance cutting with a double-edged axe a large tree, you perceive the stroke before the blow carries the sound to the ear: thus we see lightning too

quam tonitrum accipimus, pariter qui mittitur igni
e simili causa, concursu natus eodem.

Hoc etiam pacto volucris loca lumine tingunt
nubes et tremulo tempestas impete fulgit.
ventus ubi invasit nubem et versatus ibidem 175
fecit ut ante cavam docui spissescere nubem,
mobilitate sua fervescit; ut omnia motu
percalefacta vides ardescere, plumbea vero
glans etiam longa cursu volvenda liquescit.
ergo fervidus hic nubem cum perscidit atram, 180
dissipat ardoris quasi per vim expressa repente
semina quae faciunt nictantia fulgura flammae;
inde sonus sequitur qui tardius adficit auris
quam quae perveniunt oculorum ad lumina nostra.
scilicet hoc densis fit nubibus et simul alte 185
extractis aliis alias super impete miro;
ne tibi sit frudi quod nos inferne videmus
quam sint lata magis quam sursum extracta quid extent.
contemplator enim, cum montibus adsimulata
nubila portabunt venti transversa per auras, 190
aut ubi per magnos montis cumulata videbis
insuper esse aliis alia atque urguere superne

before we hear the thunder, which is discharged at the same time from the same cause, being born indeed from the same collision.

Also in the following manner clouds dye places with winged light and the storm flashes out with a rapid quivering movement. When the wind has made its way into a cloud and whirling about in it has, as I have shewn above, made the cloud hollow with a dense crust, it becomes hot by its own velocity: thus you see all things thoroughly heated and fired by motion; nay a leaden ball in whirling through a long course even melts. When therefore this wind now on fire has rent the black cloud, it scatters abroad at once seeds of fire pressed out by force so to speak, and these produce the throbbing flashes of flame; then follows a sound which strikes on the ears more slowly than the things which travel to our eyes strike on them. This you are to know takes place when the clouds are dense and at the same time piled up on high one above the other in marvellous accumulation; that you be not led into error, because we see how great their breadth is below, rather than to how great a height they are piled up. Observe, at a time when the winds shall carry clouds like to mountains with a slanting course through the air, or when you shall see them piled on the sides of great mountains one on the top of the other and pressing down from above perfectly at

in statione locata sepultis undique ventis:
 tum poteris magnas moles cognoscere eorum
 speluncasque velut saxis pendentibu' structas 195
 cernere, quas venti cum tempestate coorta
 conplerunt, magno indignantur murmure clausi
 nubibus in caveisque ferarum more minantur;
 nunc hinc nunc illinc fremitus per nubila mittunt
 quaerentesque viam circum versantur et ignis 200
 semina convolvunt e nubibus atque ita cogunt
 multa rotantque cavis flammam fornacibus intus,
 donec divolsa fulserunt nube corusci.

Hac etiam fit uti de causa mobilis ille
 devolet in terram liquidi color aureus ignis, 205
 semina quod nubes ipsas permulta necessust
 ignis habere; etenim cum sunt umore sine ullo,
 flammeus est plerumque colos et splendidus ollis.
 quin etiam solis de lumine multa necessest
 concipere, ut merito rubeant ignesque profundant. 210
 hasce igitur cum ventus agens contrusit in unum
 compressitque locum cogens, expressa profundunt
 semina quae faciunt flammae fulgere colores.
 fulgit item, cum rarescunt quoque nubila caeli.
 nam cum ventus eas leviter diducit euntis 215

rest the winds being buried on all sides: you will then be able to observe their great masses and to see caverns as it were built of hanging rocks; and when a storm has gathered and the winds have filled these, they chafe with a loud roaring shut up in the clouds, and bluster in their dens after the fashion of wild beasts: now from this point, now from that they send their growlings through the clouds, and seeking a way out whirl about and roll together seeds of fire out of the clouds and then gather many into a mass and make them rotate in the hollow furnaces within, until they have burst the cloud and shone forth in forked flashes.

From this cause again yon golden colour of clear bright fire flies down with velocity to the earth: the clouds must themselves have very many seeds of fire; for when they are without any moisture, they are mostly of a brilliant flame-colour. Moreover they must take in many from the sun's light, so that with good cause they are ruddy and shed forth fires. When therefore the wind has driven thrust squeezed together and collected into one spot these clouds, they press out and shed forth seeds which cause the colours of flame to flash out. It also lightens, when the clouds of heaven are rarefied as well. For when the wind lightly un-

dissoluitque, cadant ingratis illa necessest
 semina quae faciunt fulgorem. tum sine taetro
 terrore et sonitu fulgit nulloque tumultu.

Quod superest, *quali* natura praedita constant
 fulmina, declarant ictus et inusta vaporis 220
 signa notaeque gravis halantis sulphuris auras.
 ignis enim sunt haec non venti signa neque imbris.
 praeterea saepe accendunt quoque tecta domorum
 et celeri flamma dominantur in aedibus ipsis.
 hunc tibi subtilem cum primis ignibus ignem 225
 constituit natura minutis mobilibusque
 corporibus, cui nil omnino obsistere possit.
 transit enim validum fulmen per saepta domorum,
 clamor ut ac voces, transit per saxa, per aera,
 et liquidum puncto facit aes in tempore et aurum, 230
 curat item vasis integris vina repente
 diffugiant, quia nimirum facile omnia circum
 conlaxat rareque facit lateramina vasis
 adveniens calor eius et insinuatus in ipsum
 mobiliter soluens differt primordia vini. 235
 quod solis vapor aetatem non posse videtur
 efficere usque adeo pellens fervore corusco:

ravels and breaks them up as they move, those seeds which produce the lightning must fall perforce; and then it lightens without a hideous startling noise and without any uproar.

Well, to proceed, what kind of nature thunderbolts possess, is shewn by their strokes and the traces of their heat which have burnt themselves into things and the marks which exhale the noxious vapours of sulphur: all these are signs of fire, not of wind or rain. Again they often set on fire even the roofs of houses and with swift flame rule resistless within the house. This fire subtle above all fires nature, you are to know, forms of minute and lightly moving bodies, and it is such as nothing whatever can withstand. The mighty thunderbolt passes through the walls of houses, like a shout and voices, passes through stones, through brass, and in a moment of time melts brass and gold; and causes wine too in an instant to disappear, while the vessels are untouched, because sure enough its heat on reaching it readily loosens and rarefies all the earthen material of the vessel on every side and forcing a way within lightly separates and disperses the first-beginnings of the wine. This the sun's heat would be unable to accomplish in an age, though beating on it incessantly

tanto mobilior vis et dominantior haec est.

Nunc ea quo pacto gignantur et impete tanto
fiant ut possint ictu discludere turris, 240
disturbare domos, avellere tigna trabesque,
et monimenta virum demoliri atque cremare,
exanimare homines, pecudes prosternere passim,
cetera de genere hoc qua vi facere omnia possint,
expediam, neque *te* in promissis plura morabor. 245

Fulmina gignier e crassis alteque putandumst
nubibus exstructis; nam caelo nulla sereno
nec leviter densis mittuntur nubibus umquam.
nam dubio procul hoc fieri manifesta docet res;
quod tum per totum concrescunt aera nubes, 250
undique uti tenebras omnis Acherunta reamur
liquisse et magnas caeli complesse cavernas:
usque adeo taetra nimborum nocte coorta
inpendent atrae formidinis ora superne:
cum commoliri tempestas fulmina coeptat. 255
praeterea persaepe niger quoque per mare nimbus,
ut picis e caelo demissum flumen, in undas
sic cadit effertus tenebris procul et trahit atram
fulminibus gravidam tempestatem atque procellis,

with its quivering heat: so much more nimble and puissant is this other force.

And now in what way these are begotten and are formed with a force so resistless as to be able with their stroke to burst asunder towers, throw down houses, wrench away beams and rafters, and demolish and burn up the monuments of men, to strike men dead, to prostrate cattle far and near, by what force they can do all this and the like, I will make clear and will not longer detain you with mere professions.

Thunderbolts we must suppose to be begotten out of dense clouds piled up high; for they are never sent forth at all when the sky is clear or when the clouds are of a slight density. That this is so beyond all question is proved by facts evident to sense: clouds at such times form so dense a mass over the whole sky that we might imagine all its darkness had abandoned Acheron throughout and filled up the great vaults of heaven: in such numbers, mid the frightful night of storm-clouds that has gathered, do faces of black horror hang over us on high; what time the storm begins to forge its thunderbolts. Very often again a black storm-cloud too out at sea, like a stream of pitch sent down from heaven, falls in such wise upon the waters heavily charged with darkness afar off and draws down a black tempest big with lightnings and

ignibus ac ventis cum primis ipse repletus, 260
 in terra quoque ut horrescant ac tecta requirant.
 sic igitur supera nostrum caput esse putandumst
 tempestatem altam. neque enim caligine tanta
 obruerent terras, nisi inaedicata superne
 multa forent multis exempto nubila sole; 265
 nec tanto possent venientes opprimere imbri,
 flumina abundare ut facerent camposque natare,
 si non exstructis foret alte nubibus aether.
 hic igitur ventis atque ignibus omnia plena
 sunt; ideo passim fremitus et fulgura fiunt. 270
 quippe etenim supra docui permulta vaporis
 semina habere cavas nubes et multa necessest
 concipere ex solis radiis ardoreque eorum.
 hoc ubi ventus eas idem qui cogit in unum
 forte locum quemvis, expressit multa vaporis 275
 semina seque simul cum eo commiscuit igni,
 insinuatus ibi vortex versatur in arto
 et calidis acuit fulmen fornacibus intus.
 nam duplici ratione accenditur, ipse sua cum
 mobilitate calescit et e contagibus ignis. 280
 inde ubi percaluit venti vis *et* gravis ignis
 impetus incessit, maturum tum quasi fulmen

storms, itself so fraught above all the rest with fires and winds, that even on land men shudder and seek shelter. Thus then we must suppose that the storm above our head reaches high up; for the clouds would never bury the earth in such thick darkness, unless they were built up high heap upon heap, the sunlight totally disappearing; nor could the clouds when they descend drown it with so great a rain, as to make rivers overflow and put fields under water, if they were not piled high up in the sky. In this case then all things are filled with winds and fire; therefore thunderings and lightnings go on all about. For I have shewn above that hollow clouds have very many seeds of heat, and they must also take many in from the sun's rays and their heat. On this account when the same wind which happens to collect them into any one place, has forced out many seeds of heat and has mixed itself up with that fire, then the eddy of wind forces a way in and whirls about in the straitened room and points the thunderbolt in the fiery furnaces within; for it is kindled in two ways at once: it is heated by its own velocity and from the contact of fire. After that when the force of the wind has been thoroughly heated and the impetuous power of the fire has entered in, then the thunderbolt fully forged as it were suddenly rends the cloud,

perscindit subito nubem, ferturque coruscis
 omnia luminibus lustrans loca percitus ardor.
 quem gravis insequitur sonitus, displosa repente 285
 opprimere ut caeli videatur templa superne.
 inde tremor terras graviter pertemptat et altum
 murmura percurrunt caelum; nam tota fere tum
 tempestas concussa tremit fremitusque moventur.
 quo de concussu sequitur gravis imber et uber, 290
 omnis uti videatur in imbrem vertier aether
 atque ita praecipitans ad diluviem revocari:
 tantus discidio nubis ventique procella
 mittitur, ardenti sonitus cum provolat ictu.
 est etiam cum vis extrinsecus incita venti 295
 incidit in calidam maturo fulmine nubem;
 quam cum perscidit, extemplo cadit igneus ille
 vertex quem patrio vocitamus nomine fulmen.
 hoc fit idem in partis alias, quocumque tulit vis.
 fit quoque ut interdum venti vis missa sine igni 300
 igniscat tamen in spatio longoque meatu,
 dum venit, amittens in cursu corpora quaedam
 grandia quae nequeunt pariter penetrare per auras;
 atque alia ex ipso conradens aere portat

and their heat put in motion is carried on traversing all places with flashing lights. Close upon it follows so heavy a clap that it seems to crush down from above the quarters of heaven which have suddenly sprung asunder. Then a trembling violently seizes the earth and rumblings run through the sky; for the whole body of the storm then without exception quakes with the shock and loud roarings are aroused. After this shock follows so heavy and copious a rain that the whole ether seems to be turning into rain and then to be tumbling down and returning to a deluge: so great a flood of it is discharged by the bursting of the cloud and the storm of wind, when the sound flies forth from the burning stroke. At times too the force of the wind aroused from without falls on a cloud hot with a fully forged thunderbolt; and when it has burst it, forthwith there falls down yon fiery eddying whirl which in our native speech we call a thunderbolt. The same takes place on every other side towards which the force in question has borne down. Sometimes too the power of the wind though discharged without fire, yet catches fire in the course of its long travel, and while it is passing on, it loses on the way some large bodies which cannot like the rest get through the air; and gathers together out of the air itself and carries

parvola quae faciunt ignem commixta volando; 305
 non alia longe ratione ac plumbea saepe
 fervida fit glans in cursu, cum multa rigoris
 corpora dimittens ignem concepit in auris.
 fit quoque ut ipsius plagae vis excitet ignem,
 frigida cum venti pepulit vis missa sine igni, 310
 nimirum quia, cum vementi perculit ictu,
 confluere ex ipso possunt elementa vaporis
 et simul ex illa quae tum res excipit ictum;
 ut, lapidem ferro cum caedimus, evolat ignis,
 nec, quod frigida vis ferrist, hoc setius illi 315
 semina concurrunt calidi fulgoris ad ictum.
 sic igitur quoque res accendi fulmine debet,
 opportuna fuit si forte et idonea flammis.
 nec temere omnino plane vis frigida venti
 esse potest, ea quae tanta vi missa supernest, 320
 quin, prius in cursu si non accenditur igni,
 at tepefacta tamen veniat commixta calore.
 Mobilitas autem fit fulminis et gravis ictus,
 et celeri ferme percurrunt fulmina lapsu,
 nubibus ipsa quod omnino prius incita se vis 325
 colligit et magnum conamen sumit eundi,

along with it other bodies of very small size which mix with it and produce fire by their flight; very much in the same way as a leaden ball becomes hot during its course, when it loses many bodies of cold and has taken up fire in the air. Sometimes too the force of the blow itself strikes out fire, when the force of wind discharged in a cold state without fire has struck, because sure enough, when it has smitten with a powerful stroke, the elements of heat are able to stream together out of the wind itself and at the same time out of the thing which then encounters the stroke. Thus, when we strike a stone with iron, fire flies out; and none the less, because the force of the iron is cold, do its seeds of fiery brightness meet together upon the stroke. Therefore in the same way a thing ought to be set on fire by the thunderbolt, if it has happened to be in a state suited to receive and susceptible of the flames. At the same time the might of the wind cannot lightly be thought to be absolutely and decidedly cold, seeing that it is discharged with such force from above; but if it is not already set on fire during its course, it yet arrives in a warm state with heat mixed up in it.

But the velocity of thunderbolts is great and their stroke powerful, and they run through their course with a rapid descent, because their force when aroused first in all cases collects itself in the clouds and

inde ubi non potuit nubes capere inpetis auctum,
 exprimitur vis atque ideo volat impete miro,
 ut validis quae de tormentis missa feruntur.
 adde quod e parvis et levibus est elementis, 330
 nec facilest tali naturae opsistere quicquam;
 inter enim fugit ac penetrat per rara viarum,
 non igitur multis offensibus in remorando
 haesitat, hanc ob rem celeri volat impete labens.
 deinde, quod omnino natura pondera deorsum 335
 omnia nituntur, cum plagast addita vero,
 mobilitas duplicatur et impetus ille gravescit,
 ut vementius et citius quaecumque morantur
 obvia discutiat plagis itinerque sequatur.
 denique quod longo venit impete, sumere debet 340
 mobilitatem etiam atque etiam, quae crescit eundo
 et validas auget viris et roborat ictum.
 nam facit ut quae sint illius semina cumque
 e regione locum quasi in unum cuncta ferantur,
 omnia coniciens in eum volventia cursum. 345
 forsitan ex ipso veniens trahat aere quaedam
 corpora quae plagis incendunt mobilitatem.
 incolumisque venit per res atque integra transit

gathers itself up for a great effort at starting; then when the cloud is no longer able to hold the increased moving power, their force is pressed out and therefore it flies with a marvellous moving power, like to that with which missiles are carried when discharged from powerful engines. Then too it consists of small and smooth elements, and such a nature it is not easy for anything to withstand; for it flies between and passes in through the porous passages; therefore it is not checked and delayed by many collisions, and for this reason it glides and flies on with a swift moving power. Next, all weights without exception naturally pressing downward, when moreover a blow is added, the velocity is doubled and yon moving power becomes so intense that the nature of the thunderbolt dashes aside more impetuously and swiftly whatever gets in its way and tries to hinder it, and pursues its journey. Again as it advances with a long-continued moving power, it must again and again receive new velocity which ever increases as it goes on and augments its powerful might and gives vigour to its stroke; for it forces all the seeds of the thunder to be borne right onward to one spot so to speak, throwing them all together, as on they roll, into that single line. Perhaps too as it goes on it attracts certain bodies out of the air to itself, and these by their blows kindle apace its velocity. It passes too through things with-

multa, foraminibus liquidus quia transvolat ignis.
 multaue perfringit, cum corpora fulminis ipsa 350
 corporibus rerum inciderunt, qua texta tenentur.
 dissoluit porro facile aes aurumque repente
 confervescit, e parvis quia facta minute
 corporibus vis est et levibus ex elementis,
 quae facile insinuantur et insinuata repente 355
 dissolvent nodos omnis et vincla relaxant.
 autumnoque magis stellis fulgentibus apta
 concutitur caeli domus undique totaque tellus,
 et cum tempora se veris florentia pandunt.
 frigore enim desunt ignes ventique calore 360
 deficiunt neque sunt tam denso corpore nubes.
 interutraque igitur cum caeli tempora constant,
 tum variae causae concurrunt fulminis omnes.
 nam fretus ipse anni permiscet frigus *et* aestum,
 quorum utrumque opus est fabricanda ad fulmina nubi, 365
 ut discordia *sit* rerum magnoque tumultu
 ignibus et ventis furibundus fluctuet aer.
 prima caloris enim pars et postrema rigoris,
 tempus id est vernum; quare pugnare necessest
 dissimilis res inter se turbareque mixtas. 370

out injuring them, and leaves many things quite whole after it has gone through, because the clear bright fire flies through by the pores. And it breaks to pieces many things, when the first bodies of the thunderbolt have fallen exactly on the first bodies of these things, at the points where they are intertwined and held together. Again it easily melts brass and fuses gold in an instant, because its force is formed of bodies minutely small and of smooth elements, which easily make their way in and when they are in, in a moment break up all the knots and untie the bonds of union. And more especially in autumn the mansion of heaven studded with glittering stars and the whole earth are shaken on all sides, and also when the flowery season of spring discloses itself. For during the cold fires are wanting and winds fail during the heat, and the clouds then are not of so dense a body. When therefore the seasons of heaven are between the two extremes, the different causes of thunder and lightning all combine; for the very cross-current of the year mixes up cold and heat, both of which a cloud needs for forging thunderbolts; so that there is great discord in things and the air raving with fires and winds heaves in mighty disorder. The first part of heat and the last of cold is the spring-time; therefore unlike things must battle with one another and be turbulent when mixed together. And when the last

et calor extremus primo cum frigore mixtus
 volvitur, autumnus quod fertur nomine tempus,
 hic quoque conflagrant hiemes aestatibus acres.
 propterea *freta* sunt haec anni nomenita,
 nec mirumst, in eo si tempore plurima fiunt 375
 fulmina tempestasque cietur turbida caelo,
 ancipiti quoniam bello turbatur utrimque,
 hinc flammis illinc ventis umoreque mixto.

Hoc est igniferi naturam fulminis ipsam
 perspicere et qua vi faciat rem quamque videre, 380
 non Tyrrhena retro volventem carmina frustra
 indicia occultae divum perquirere mentis,
 unde volans ignis pervenerit aut in utram se
 verterit hinc partim, quo pacto per loca saepta
 insinuarit, et hinc dominatus ut extulerit se, 385
 quidve nocere queat de caelo fulminis ictus.
 quod si Iuppiter atque alii fulgentia divi
 terrifico quatunt sonitu caelestia templa
 et iaciunt ignem quo *quoique* cumque voluptas,
 cur quibus incautum scelus aversabile cumque 390
 non faciunt icti flammis ut fulguris halent
 pectore prefixo, documen mortalibus acre,

heat mixed with the first cold rolls on its course, a time which goes by the name of autumn, then too fierce winters are in conflict with summers. Therefore these seasons are to be called the cross-seas of the year; and it is not wonderful, that in that season thunderbolts are most frequent, and troublous storms are stirred up in heaven; since both sides then engage in the troublous medley of dubious war, the one armed with flames, the other with winds and water commingled.

This is the way to see into the true nature of the thunderbolt and to understand by what force it produces each effect, and not the turning over the scrolls of Tyrrhene charms and vainly searching for tokens of the hidden will of the gods, in order to know from what quarter the volant fire has come or to which of the two halves it has betaken itself, in what way it has gained an entrance within walled places, and how after lording it with tyrant sway it has extricated itself from these; also what harm the thunderstroke from heaven can do. But if Jupiter and other gods shake with an appalling crash the glittering quarters of heaven, and hurl their fire whither each is so minded, why strike they not those whoever they be who have recked not of committing some abominable sin and make them give forth the flames of lightning from breast pierced through and through, a sharp lesson to men? and why rather is

et potius nulla sibi turpi conscius in re
 volvitur in flammis innoxius inque peditur
 turbine caelesti subito correptus et igni? 395
 cur etiam loca sola petunt frustra laborant?
 an tum bracchia consuescunt firmantque lacertos?
 in terraque patris cur telum perpetiuntur
 optundi? cur ipse sinit neque parcit in hostis?
 denique cur numquam caelo iacit undique puro 400
 Iuppiter *in terras* fulmen sonitusque profundit?
 an simul ac nubes successere, ipse in eas tum
 descendit, prope ut hinc teli determinet ictus?
 in mare qua porro mittit ratione? quid undas
 arguit et liquidam molem camposque natantis? 405
 praeterea si vult caveamus fulminis ictum,
 cur dubitat facere ut possimus cernere missum?
 si nec opinantis autem volt opprimere igni,
 cur tonat ex illa parte, ut vitare queamus,
 cur tenebras ante et fremitus et murmura concit? 410
 et simul in multas partis qui credere possis
 mittere? an hoc ausis numquam contendere factum,
 ut fierent ictus uno sub tempore plures?
 at saepe numero factum fierique necessest,

he whose conscience is burdened with no foul offence, innocent though
 he be, wrapped and enveloped in the flames, in a moment caught up by
 the whirlwind and fire of heaven? Why too aim they at solitary spots
 and spend their labour in vain? or are they then practising their arms
 and strengthening their sinews? and why do they suffer the father's bolt
 to be blunted on the earth? why does he allow it himself, and not spare
 it for his enemies? Why again, when heaven is unclouded on all sides,
 does Jupiter never hurl a bolt on the earth or send abroad his claps? or
 does he, so soon as clouds have spread under, then go down in person
 into them, that from them he may aim the strokes of his bolt near at
 hand? Ay and for what reason does he hurl into the sea? of what has
 he to impeach its waters and liquid mass and floating fields? Again if
 he wills us to avoid the thunderstroke, why fears he to let us see it dis-
 charged? or if he wills to crush us off our guard with his fire, why
 thunders he from that side, to enable us to shun it? why stirs he up
 beforehand darkness and roarings and rumblings? And how can you
 believe that he hurls at many points at the same time? or would you
 venture to maintain that it never has happened that more than one
 stroke was made at one time? Nay often and often it has happened

ut pluere in multis regionibus et cadere imbris, 415
 fulmina sic uno fieri sub tempore multa.
 postremo cur sancta deum delubra suasque
 discutit infesto praeclaras fulmine sedes
 et bene facta deum frangit simulacra suisque
 demit imaginibus violento vulnere honorem? 420
 altaque cur plerumque petit loca plurimaque eius
 montibus in summis vestigia cernimus ignis?

Quod superest, facilest ex his cognoscere rebus,
 presteras Grai quos ab re nominatarunt,
 in mare qua missi veniant ratione superne. 425
 nam fit ut interdum tamquam demissa columna
 in mare de caelo descendat, quam freta circum
 fervereunt graviter spirantibus incita flabris,
 et quaecumque in eo tum sint deprensa tumultu
 navigia in summum veniant vexata periculum. 430
 hoc fit ubi interdum non quit vis incita venti
 rumpere quam coepit nubem, sed deprimit, ut sit
 in mare de caelo tamquam demissa columna,
 paulatim, quasi quid pugno bracchique superne
 coniectu trudatur et extendatur in undas; 435
 quam cum discidit, hinc prorumpitur in mare venti

and must happen that, even as it rains and showers fall in many different quarters, so many thunderings go on at one time. Once more why does he dash down the holy sanctuaries of the gods and his own gorgeous seats with the destructive thunderbolt, and break the fine-wrought idols of the gods, and spoil his own images of their glory by an overbearing wound? and why does he mostly aim at lofty spots, and why do we see most traces of his fire on the mountain tops?

To proceed, it is easy from these facts to understand in what way those things, which the Greeks from their nature have named presteres, come down from above into the sea. For sometimes a pillar so to speak is let down from heaven and descends into the sea, and round about it the surges boil, roused by heavy blasts of winds; and all ships caught in that turmoil are dashed about and brought into extreme danger. This takes place when at times the force of the wind aroused cannot burst the cloud which it essays to burst, but weighs it down, so that it is like a pillar let down from heaven into the sea, but gradually, just as if a thing were thrust down from above and stretched out to the level of the waters by the fist and push of the arm; and when the force of the wind has rent this cloud, it bursts out from it into the sea and occasions

vis et fervorem mirum concinnat in undis;
 versabundus enim turbo descendit et illam
 deducit pariter lento cum corpore nubem;
 quam simul ac gravidam detrusit ad aequora ponti, 440
 ille in aquam subito totum se inmittit et omne
 excitat ingenti sonitu mare fervere cogens.
 fit quoque ut involvat venti se nubibus ipse
 vertex conradens ex aere semina nubis
 et quasi demissum caelo prester a imitetur. 445
 hic ubi se in terras demisit dissoluitque,
 turbinis inmanem vim provomit atque procellae.
 sed quia fit raro omnino montisque necessest
 officere in terris, apparet crebrius idem
 prospectu maris in magno caeloque patenti. 450

Nubila concrescunt, ubi corpora multa volando
 hoc supero in caeli spatio coiere repente
 asperiora, moris quae possint indupedita
 exiguis tamen inter se comprehensa teneri.
 haec faciunt primum parvas consistere nubes; 455
 inde haec comprehendunt inter se conque gregantur
 et coniungendo crescunt ventisque feruntur
 usque adeo donec tempestas saeva coortast.

a wondrous boiling in the waters; for the whirling eddy descends and brings down together with it yon cloud of limber body; and as soon as it has forced it down full-charged as it is to the levels of the sea, the eddy in a moment plunges itself entire into the water, and stirs up the whole sea with a prodigious noise and forces it to boil. Sometimes too the eddy of wind wraps itself up in clouds and gathers out of the air seeds of cloud and imitates in a sort the prester let down from heaven. When this prester has let itself down to the land and has burst, it belches forth a whirlwind and storm of enormous violence; but as it seldom takes place at all and as mountains cannot but obstruct it on land, it is seen more frequently on the sea with its wide prospect and unobstructed horizon.

Clouds are formed, when in this upper space of heaven many bodies flying about have in some one instant met together, of a rougher sort, such as are able, though they have got the very slightest holds of each other, to catch together and be held in union. These bodies first cause small clouds to form; and these next catch together and collect into masses and increase by joining with each other and are carried on by the winds continually until a fierce storm has gathered. The nearer

fit quoque uti montis vicina cacumina caelo
 quam sint quoque magis, tanto magis edita fument 460
 adsidue furvae nubis caligine crassa
 propterea quia, cum consistunt nubila primum,
 ante videre oculi quam possint, tenuia, venti
 portantes cogunt ad summa cacumina montis.
 hic demum fit uti turba maiore coorta 465
 et condensa queant apparere et simul ipso
 vertice de montis videantur surgere in aethram.
 nam loca declarat sursum ventosa patere
 res ipsa et sensus, montis cum ascendimus altos.
 praeterea permulta mari quoque tollere toto 470
 corpora naturam declarant litore vestes
 suspensae, cum concipiunt umoris adhaesum.
 quo magis ad nubis augendas multa videntur
 posse quoque e salso consurgere momine ponti;
 nam ratio consanguineast umoribus ollis. 475
 praeterea fluviis ex omnibus et simul ipsa
 surgere de terra nebulas aestumque videmus,
 quae velut halitus hinc ita sursum expressa feruntur
 suffunduntque sua caelum caligine et altas
 sufficiunt nubis paulatim conveniundo; 480
 urget enim quoque signiferi super aetheris aestus

too the tops of a mountain in each case are to heaven, the more constantly at this elevation they smoke with the thick darkness of a swarthy cloud, because, when clouds first form, before the eyes can see them, thin as they are, the winds carry and bring them together to the highest summits of a mountain; and then at last when a greater mass of them has gathered together, being now dense they are able to make themselves visible and at the same time they are seen to rise up from the very top of the mountain into the ether: the very fact of the case and our sensations, when we climb high mountains, prove that the regions which stretch up on high are windy. Again clothes hung up on the shore, when they drink in the clinging moisture, prove that nature takes up many bodies over the whole sea as well. This makes it still more plain that many bodies may likewise rise up out of the salt heaving sea to add to the bulk of clouds; for the two liquids are near akin in their nature. Again we see mists and steam rise out of all rivers and at the same time from the earth as well; and these forced out like a breath from these parts are then carried upwards and overcast heaven with their darkness and make up clouds on high as they gradually come together; for the heat of starry ether at the same time presses down on

et quasi densendo subtexit caerula nimbis.
 fit quoque ut huc veniant in caelum extrinsecus illa
 corpora quae faciunt nubis nimbosque volantis;
 innumerabilem enim numerum summamque profundi 485
 esse infinitam docui, quantaque volarent
 corpora mobilitate ostendi quamque repente
 inmemorabile *per* spatium transire solerent.
 haut igitur mirumst si parvo tempore saepe
 tam magnis nimbis tempestas atque tenebrae 490
 coperiunt maria ac terras inpressa superne,
 undique quandoquidem per caulas aetheris omnis
 et quasi per magni circum spiracula mundi
 exitus introitusque elementis redditus extat.

Nunc age, quo pacto pluvius concreseat in altis 495
 nubibus umor et in terras demissus ut imber
 decidat, expediam. primum iam semina aquai
 multa simul vincam consurgere nubibus ipsis
 omnibus ex rebus pariterque ita crescere utrumque
 et nubis et aquam quaecumque in nubibus extat, 500
 ut pariter nobis corpus cum sanguine crescit,
 sudor item atque umor quicumque est denique membris.
 concipiunt etiam multum quoque saepe marinum
 umorem, veluti pendentia vellera lanae,

them and by condensing as it were weaves a web of clouds below its blue expanse. Sometimes there come here into heaven from without those bodies which form clouds and the flying storm-rack; for I have shewn that their number passes numbering and that the sum of the deep is infinite; and I have proved with what velocity bodies fly and how in a moment of time they are wont to pass through space unspeakable. It is not therefore strange that a tempest and darkness often in a short time cover over with such great storm-clouds seas and lands, as they hang down upon them overhead, since on all sides through all the cavities of ether and as it were through the vents of the great world around the power of going out and coming in is accorded to the elements.

Now mark and I will explain in what way the rainy moisture is formed in the clouds and then is sent down and falls to the earth in the shape of rain. And first I will prove that many seeds of water rise up together with the clouds themselves out of all things and that both the clouds and the water which is in the clouds thus increase together; just as our body increases together with the blood, as well as the sweat and all the moisture which is in the frame. The clouds likewise imbibe much sea-water as well, like hanging fleeces of wool, when the winds

cum supera magnum mare venti nubila portant. 505
 consimili ratione ex omnibus amnibus umor
 tollitur in nubis. quo cum bene semina aquarum
 multa modis multis convenere undique adaucta,
 confertae nubes *umorem* mittere certant
 dupliciter; nam vis venti contrudit et ipsa 510
 copia nimborum turba maiore coacta
 urget, de supero premit ac facit effluere imbris.
 praeterea cum rarescunt quoque nubila ventis
 aut dissolvuntur, solis super icta calore,
 mittunt umorem pluvium stillantque, quasi igni 515
 cera super calido tabescens multa liquescat.
 sed vemens imber fit, ubi vehementer utraque
 nubila vi cumulata premuntur et impete venti.
 atque tenere diu pluviae longumque morari
 consuerunt, ubi multa cientur semina aquarum 520
 atque aliis aliae nubes nimbique rigantes
 insuper atque omni vulgo de parte feruntur,
 terraque cum fumans umorem tota redhalat.
 hic ubi sol radiis tempestatem inter opacam
 adversa fulsit nimborum aspargine contra, 525
 tum color in nigris existit nubibus archi.

carry them over the great sea. In like manner moisture is taken up out of all rivers into the clouds; and when the seeds of waters many in number in many ways have fully met in them, augmented from all sides, then the close-packed clouds endeavour to discharge their moisture from two causes: the force of the wind drives them together, and likewise the very abundance of the rain-clouds, when a greater mass than usual has gathered, pushes down, presses from above and forces the rain to stream out. Again when the clouds are also rarefied by the winds, or are dispersed, being smitten at the same time by the heat of the sun, they discharge a rainy moisture and trickle down, just as wax over a hot fire melts away and turns fast into liquid. But a violent rain follows, when the clouds are violently pressed upon by both causes, by their own accumulated weight and by the impetuous assault of the wind. And rains are wont to hold out and to last long, when many seeds of waters are stirred to action, and clouds upon clouds and rack upon rack welling forth from all quarters round about are borne along, and when the reeking earth steams moisture back again from its whole surface. When in such a case the sun has shone with his rays amid the murky tempest right opposite the dripping rain-clouds, then the colour of the rainbow shews itself among the black clouds.

Cetera quae sorsum crescunt sorsumque creantur,
 et quae concrescunt in nubibus, omnia, prorsum
 omnia, nix venti grando gelidaeque pruinae
 et vis magna geli, magnum duramen aquarum, 530
 et mora quae fluvios passim refrenat euntis,
 perfacilest tamen haec reperire animoque videre
 omnia quo pacto fiant quareve creentur,
 cum bene cognoris elementis reddita quae sint.

Nunc age quae ratio terrai motibus extet 535
 percipe. et in primis terram fac ut esse rearis
 supter item ut supera ventosis undique plenam
 speluncis multosque lacus multasque lucunas
 in gremio gerere et rupes deruptaque saxa;
 multaque sub tergo terrai flumina tecta 540
 volvere vi fluctus summersaque saxa putandumst;
 undique enim similem esse sui res postulat ipsa.
 his igitur rebus subiunctis suppositisque
 terra superne tremit magnis concussa ruinis,
 subter ubi ingentis speluncas subruit aetas; 545
 quippe cadunt toti montes magnoque repente
 concussu late disserpunt inde tremores.
 et merito, quoniam plaustris concussa tremescunt

As to the other things which grow by themselves and are formed by themselves, as well as the things which are formed within the clouds, all, without exception all, snow winds hail and cold hoarfrosts and the great force of ice, the great congealing power of waters, and the stop which everywhere curbs running rivers, it is yet most easy to find out and apprehend in mind how all these things take place and in what way they are formed, when you have fully understood the properties assigned to elements.

Now mark and learn what the law of earthquakes is. And first of all take for granted that the earth below us as well as above is filled in all parts with windy caverns and bears within its bosom many lakes and many chasms, cliffs and craggy rocks; and you must suppose that many rivers hidden beneath the crust of the earth roll on with violence waves and submerged stones; for the very nature of the case requires it to be throughout like to itself. With such things then attached and placed below, the earth quakes above from the shock of great falling masses, when underneath time has undermined vast caverns; whole mountains indeed fall in, and in an instant from the mighty shock tremblings spread themselves far and wide from that centre. And with good cause,

tecta viam propter non magno pondere tota,
 nec minus exultant, scrupus *quicumque* viai 550
 ferratos utrimque rotarum succutit orbes.
 fit quoque, ubi in magnas aquae vastasque lucunas
 gleba vetustate e terra provolvitur ingens,
 ut iactetur aquae fluctu quoque terra vacillans;
 ut vas *interdum* non quit constare, nisi umor 555
 destitit in dubio fluctu iactarier intus.

Praeterea ventus cum per loca subcava terrae
 collectus parte ex una procumbit et urget
 obnixus magnis speluncas viribus altas,
 incumbit tellus quo venti prona premit vis. 560
 tum supera terram quae sunt extructa domorum
 ad caelumque magis quanto sunt edita quaeque,
 inclinata *tument* in eandem prodita partem
 protractaeque trabes inpendent ire paratae.
 et metuunt magni naturam credere mundi 565
 exitiale aliquod tempus clademque manere,
 cum videant tantam terrarum incumbere molem!
 quod nisi respirent venti, vis nulla refrenet
 res neque ab exitio possit reprehendere euntis.
 nunc quia respirant alternis inque gravescunt 570

since buildings beside a road tremble throughout when shaken by a
 waggon of not such very great weight; and they rock no less, when any
 sharp pebble on the road jolts up the iron tires of the wheels on both
 sides. Sometimes too, when an enormous mass of soil through age rolls
 down from the land into great and extensive pools of water, the earth
 rocks and sways with the undulation of the water; just as a vessel at
 times cannot rest, until the liquid within has ceased to sway about in
 unsteady undulations.

Again when the wind gathering itself together in the hollow places
 underground bears down on one point and pushing on presses with great
 violence the deep caverns, the earth leans over on the side to which the
 headlong violence of the wind presses. Then all buildings which are
 above ground, and ever the more, the more they tower up towards
 heaven, lean over and bulge out yielding in the same direction, and the
 timbers wrenched from their supports hang over ready to give way. And
 yet men shrink from believing that a time of destruction and ruin
 awaits the nature of the great world, though they see so great a mass of
 earth hang ready to fall! And if the winds did not abate their blowing,
 no force could rein things in or hold them up on their road to destruc-
 tion. As it is, because by turns they do abate and then increase in

et quasi collecti redeunt ceduntque repulsi,
 saepius hanc ob rem minitatur terra ruinas
 quam facit; inclinatur enim retroque recellit
 et recipit prolapsa suas in pondere sedes.
 hac igitur ratione vacillant omnia tecta, 575
 summa magis mediis, media imis, ima perhilum.

Est haec eiusdem quoque magni causa tremoris,
 ventus ubi atque animae subito vis maxima quaedam
 aut extrinsecus aut ipsa tellure coorta
 in loca se cava terrai coniecit ibique 580
 speluncas inter magnas fremit ante tumultu
 versabundaque portatur, post incita cum vis
 exagitata foras erumpitur et simul altam
 diffindens terram magnum concinnat hiatum.
 in Syria Sidone quod accidit et fuit Aegi 585
 in Peloponneso, quas exitus hic animai
 disturbat urbes et terrae motus obortus.
 multaque praeterea ceciderunt moenia magnis
 motibus in terris et multae per mare pessum
 subsedere suis pariter cum civibus urbes. 590
 quod nisi prorumpit, tamen impetus ipse animai
 et fera vis venti per crebra foramina terrae

violence, and so to speak rally and return to the charge, and then are defeated and retire, for this reason the earth oftener threatens to fall than really falls: it leans forward and then sways back again, and after tumbling forward recovers in equal poise its fixed position. For this reason the whole house rocks, the top more than the middle, the middle than the bottom, the bottom in a very very slight degree.

The same great quaking likewise arises from this cause, when on a sudden the wind and some enormous force of air gathering either from without or within the earth have flung themselves into the cavities of the earth, and there chafe at first with much uproar among the great caverns and are carried on with a whirling motion, and when their force afterwards stirred and lashed into fury bursts abroad and at the same moment cleaves the deep earth and opens up a great yawning chasm. This fell out in Syrian Sidon and took place at Aegium in the Peloponneso two towns which an outbreak of wind of this sort and the ensuing earthquake threw down. And many walled places besides fell down by great commotions on land and many towns sank down engulfed in the sea together with their burghers. And if they do not break out, still the impetuous fury of the air and the fierce violence of the wind spread over

dispertitur ut horror et incutit inde tremorem;
 frigus uti nostros penitus cum venit in artus,
 concutit invitos cogens tremere atque movere. 595
 ancipiti trepidant igitur terrore per urbis,
 tecta superne timent, metuunt inferne cavernas
 terrai ne dissoluat natura repente,
 neu distracta suum late dispanadat hiatum
 adque suis confusa velit complere ruinis. 600
 proinde licet quamvis caelum terramque reantur
 incorrupta fore aeternae mandata saluti;
 et tamen interdum praesens vis ipsa pericli
 subdit et hunc stimulum quadam de parte timoris,
 ne pedibus raptim tellus subtracta feratur 605
 in barathrum rerumque sequatur prodita summa
 funditus et fiat mundi confusa ruina.

[Principio mare mirantur non reddere maius
 naturam, quo sit tantus decursus aquarum,
 omnia quo veniant ex omni flumina parte 610
 adde vagos imbris tempestatesque volantes,
 omnia quae maria ac terras sparguntque rigantque;
 adde suos fontis; tamen ad maris omnia summam

the numerous passages of the earth like a shivering-fit and thereby cause a trembling; just as cold when it has pierced into our frames to the very marrow, sets them a-shivering in spite of themselves, forcing them to shake and move. Men are therefore disturbed by a two-edged terroure throughout their cities; they fear the roofs above their heads, they dread lest the nature of the earth in a moment break up her caverns underneath; and rent asunder display her own wide-gaping maw and wildly tumbled together seek to fill it up with her own ruins. Let them then fancy as much as they please that heaven and earth shall be incorruptible and consigned to an everlasting exemption from decay; and yet sometimes the very present force of danger applies on some side or other this goad of fear among others, that the earth shall in an instant be withdrawn from under their feet and carried down into the pit, and that the sum of things shall utterly give way and follow after and a jumbled wreck of world ensue.

First of all they wonder that nature does not increase the bulk of the sea, when there is so great a flow of water into it, when all rivers from all quarters fall into it. Add to these passing rains and flying storms, which bespatter every sea and moisten every land; add its own springs; yet all these compared with the sum of the sea will be like an

guttai vix instar erunt unius adaugmen;
 quo minus est mirum mare non augescere magnum. 615
 praeterea magnam sol partem detrahit aestu.
 quippe videmus enim vestis umore madentis
 exsiccare suis radiis ardentibu' solem:
 at pelage multa et late substrata videmus.
 proinde licet quamvis ex uno quoque loco sol 620
 umoris parvam delibet ab aequore partem;
 largiter in tanto spatio tamen auferet undis.
 tum porro venti quoque magnam tollere partem
 umoris possunt verrentes aequora, ventis
 una nocte vias quoniam persaepe videmus 625
 siccari mollisque luti concreescere crustas.
 praeterea docui multum quoque tollere nubes
 umorem magno conceptum ex aequore ponti
 et passim toto terrarum spargere in orbi,
 cum pluit in terris et venti nubila portant. 630
 postremo quoniam raro cum corpore tellus
 est, et coniunctast, oras maris undique cingens,
 debet ut in mare de terris venit umor aquai,
 in terras itidem manare ex aequore salso;
 percolatur enim virus retroque remanat 635
 materies umoris et ad caput amnibus omnis
 confluit, inde super terras redit agmine dulci

addition of bulk hardly amounting to a single drop; it is therefore the less wonderful that the great sea does not increase. Again the sun absorbs a great deal with his heat: we see him with his burning rays thoroughly dry clothes dripping with wet: but we know seas to be many in number and to stretch over a wide surface. Therefore however small the portion of moisture which the sun draws off the surface from any one spot; it will yet in so vast an expanse take largely from its waters. Then again the winds too may withdraw a great deal of moisture as they sweep over the surface, since we very often see the roads dried by the winds in a single night and the soft mud form into hard crusts. Again I have shewn that the clouds take off much moisture too imbibed from the surface of the sea and scatter it about over the whole earth, when it rains on land and the winds carry on the clouds. Lastly since the earth is of a porous body and is in contact with the sea, girding its shores all round, just as water comes from the earth into the sea, in the same way it must ooze into the land out of the salt sea; for the salt is strained off and the matter of liquid streams back again to the source and all meets together at the river-heads, and then flows over the lands

qua via secta semel liquido pede *detulit* undas.]

Nunc ratio quae sit, per fauces montis ut Aetnae
 expirent ignes interdum turbine tanto, 640
 expediam. neque enim mediocri clade coorta
 flammea tempestas Siculum dominata per agros
 finitimis ad se convertit gentibus ora,
 fumida cum caeli scintillare omnia templa
 cernentes pavida complebant pectora cura, 645
 quid moliretur rerum natura novarum.

Hisce tibi in rebus latest alteque videndum
 et longe cunctas in partis dispiciendum,
 ut reminiscaris summam rerum esse profundam
 et videas caelum summai totius unum 650
 quam sit parvula pars et quam multesima constet
 nec tota pars, homo terrai quota totius unus.
 quod bene propositum si plane contueare
 ac videas plane, mirari multa relinquo.
 numquis enim nostrum miratur siquis in artus 655
 accepit calido febrim fervore coortam
 aut alium quemvis morbi per membra dolorem?
 opturgescit enim subito pes, arripit acer
 saepe dolor dentes, oculos invadit in ipsos,

in a fresh current, where a channel once scooped out has carried down the waters with liquid foot.

And now I will explain why it is that fires breathe forth at times through the gorges of mount Aetna with such hurricane-like fury; for with a destroying force of no ordinary kind the flame-storm gathered itself up and lording it over the lands of the Sicilians drew on itself the gaze of neighbouring nations, when seeing all the quarters of heaven smoke and sparkle men were filled in heart with awe-struck apprehension, not knowing what strange change nature was travailing to work.

In these matters you must look far and deep and make a wide survey in all directions, in order to bear in mind that the sum of things is unfathomable and to perceive how very small, how inconceivably minute a fraction of the whole sum one heaven is, not so large a fraction of it as one man is of the whole earth. If you should clearly comprehend, clearly see this point well put, you would cease to wonder at many things. Does any one among us wonder if he has gotten into his frame a fever that has broken out with burning heat, or into his body the pains of any other disease? the foot suddenly swells, sharp pain often seizes the teeth, attacks even the eyes; the holy fire breaks out and creeping over

existit sacer ignis et urit corpore serpens 660
 quamcumque arripuit partim, repitque per artus,
 nimirum quia sunt multarum semina rerum,
 et satis haec tellus nobis caelumque mali fert,
 unde queat vis immensi procrecere morbi.
 sic igitur toti caelo terraeque putandumst 665
 ex infinito satis omnia suppeditare,
 unde repente queat tellus concussa moveri
 perque mare ac terras rapidus procurrere turbo,
 ignis abundare Aetnaeus, flammescere caelum;
 id quoque enim fit et ardescunt caelestia templa, 670
 et tempestates pluviae graviore coortu
 sunt, ubi forte ita se tetulerunt semina aquarum.
 'at nimis est ingens incendi turbidus ardor.'
 scilicet et fluvius quivis est maximus ei
 qui non ante aliquem maiorem vidit, et ingens 675
 arbor homoque videtur, et omnia de genere omni
 maxima quae vidit quisque, haec ingentia fingit,
 cum tamen omnia cum caelo terraque marique
 nil sint ad summam summai totius omnem.
 Nunc tamen illa modis quibus inritata repente 680
 flamma foras vastis Aetnae fornacibus efflet,
 expediam. primum totius subcava montis

the body burns whatever part it has seized upon, and spreads over the frame, because sure enough there are seeds of many things, and this earth and heaven bring to us evil enough to allow of a measureless amount of disease springing up. In this way then we must suppose that all things are supplied out of the infinite to the whole heaven and earth in quantity sufficient to allow the earth in a moment to be shaken and stirred, and a rapid hurricane to scour over sea and land, the fire of Aetna to overflow, the heaven to be in flames; for that too is seen and the heavenly quarters are on fire; and rain-storms gather in a heavier mass, when the seeds of water have haply come together for such an end. 'Ay but the stormy rage of the conflagration is too too gigantic.' Yes and so any river you like is the greatest to him who has never before seen any greater, and thus a tree and a man seem gigantic, and in the case of all things of all kinds the greatest a man has seen he fancies to be gigantic, though yet all things with heaven and earth and sea included are nothing to the whole sum of the universal sum.

And now at last I will explain in what ways yon flame roused to fury in a moment blazes forth from the huge furnaces of Aetna. And first the nature of the whole mountain is hollow underneath, under-

est natura, fere silicum suffulta cavernis.
 omnibus est porro in speluncis ventus et aer;
 ventus enim fit, ubi est agitando percitus aer. 685
 hic ubi percaluit calefecitque omnia circum
 saxa furens, qua contingit, terramque, et ab ollis
 excussit calidum flammis velocibus ignem,
 tollit se ac rectis ita faucibus eicit alte.
 fert itaque ardorem longe longeque favillam 690
 differt et crassa volvit caligine fumum
 extruditque simul mirando pondere saxa;
 ne dubites quin haec animai turbida sit vis.
 praeterea magna ex parti mare montis ad eius
 radices frangit fluctus aestumque resorbet. 695
 ex hoc usque mari speluncae montis ad altas
 perveniunt subter fauces. hac ire fatendumst

 et penetrare mari penitus res cogit aperto
 atque efflare foras ideoque extollere flammam
 saxaque subiectare et arenae tollere nimbos. 700
 in summo sunt vertice enim crateres, ut ipsi
 nominant; nos quod fauces perhibemus et ora.

Sunt aliquot quoque res quarum unam dicere causam

propped throughout with caverns of basalt rocks. Furthermore in all
 caves are wind and air; for wind is produced, when the air has been
 stirred and put in motion. When this air has been thoroughly heated
 and raging about has imparted its heat to all the rocks round, wherever
 it comes in contact with them, and to the earth, and has struck out from
 them fire burning with swift flames, it rises up and then forces itself out
 on high straight through the gorges; and so carries its heat far and
 scatters far its ashes and rolls on smoke of a thick pitchy blackness and
 flings out at the same time stones of prodigious weight; leaving no
 doubt that this is the stormy force of air. Again the sea to a great ex-
 tent breaks its waves and sucks back its surf at the roots of that moun-
 tain. Caverns reach from this sea as far as the deep gorges of the
 mountain below. Through these you must admit [that air mixed up
 with water passes; and] the nature of the case compels [this air to enter
 in from that] open sea and pass right within and then go out in blasts
 and so lift up flame and throw out stones and raise clouds of sand; for
 on the summit are craters, as they name them in their own language;
 what we call gorges and mouths.

There are some things too for which it is not sufficient to assign one

non satis est, verum pluris, unde una tamen sit;
 corpus ut exanimum siquod procul ipse iacere 705
 conspicias hominis, fit ut omnis dicere causas
 conveniat leti, dicatur ut illius una.

nam neque eum ferro nec frigore vincere possis
 interiisse neque a morbo neque forte veneno,
 verum aliquid genere esse ex hoc quod contigit ei 710
 scimus. item in multis hoc rebus dicere habemus.

Nilus in æstatem crescit campisque redundat,
 unicus in terris Aegypti totius amnis.
 is rigat Aegyptum medium per saepe calorem,
 aut quia sunt aestate aquilones ostia contra, 715
 anni tempore eo qui etesiae esse feruntur,
 et contra fluvium flantes remorantur et undas
 cogentes sursus replent coguntque manere.

nam dubio procul hæc adverso flabra feruntur
 flumine, quae gelidis ab stellis axis aguntur. 720

ille ex aestifera parti venit amnis ab austro,
 inter nigra virum percocto saecula colore
 exoriens penitus media ab regione diei.
 est quoque uti possit magnus congestus harenae
 fluctibus adversis oppilare ostia contra, 725

cause; you must give several, one of which at the same time is the real cause. For instance should you see the lifeless body of a man lying at some distance, it would be natural to mention all the different causes of death, in order that the one real cause of that man's death be mentioned among them. Thus you may be able to prove that he has not died by steel or cold or from disease or haply from poison; yet we know that it is something of this kind which has befallen him; and so in many other cases we may make the same remark.

The Nile rises in summer and overflows the plains, that one sole river throughout the whole land of Egypt. It waters Egypt often in the middle of the hot season, either because in summer there are north winds opposite its mouths, which at that time of year go by the name of Etesian winds. Blowing up the river they retard it and driving the waters backwards fill the channel full and force the waters to stand still; for beyond a doubt these blasts which start from the icy constellations of the pole are carried right up the stream. That river comes from the south out of the heat-fraught country, rising far up from the central region of day among races of men black in their sun-baked complexion. It is quite possible too that the great accumulation of sand may bar up the mouths right across against the descending currents,

cum mare permotum ventis ruit intus harenam;
 quo fit uti pacto liber minus exitus amni
 et proclivis item fiat minus impetus undis.
 fit quoque uti pluviae forsan magis ad caput ei
 tempore eo fiant, quod etesia flabra aquilonum 730
 nubila coniciunt in eas tunc omnia partis.
 scilicet ad mediam regionem eiecta diei
 cum convenerunt, ibi ad altos denique montis
 contrusae nubes coguntur vique premuntur.
 forsitan Aethiopum penitus de montibus altis 735
 crescat, ubi in campos albas descendere ningues
 tabificis subigit radiis sol omnia lustrans.

Nunc age, Averno tibi quae sint loca cumque lacusque
 expediam, quali natura praedita constant.
 principio quod Averno vocantur nomine, id ab re 740
 inpositumst, quia sunt avibus contraria cunctis,
 e regione ea quod loca cum venere volantes,
 remigi oblitae pennarum vela remittunt
 praecipitesque cadunt molli cervice profusae
 in terram, si forte ita fert natura locorum, 745
 aut in aquam, si forte lacus substratus Avernist.

when the sea stirred up by the winds throws up the sand within the channel; whereby the outlet of the river is rendered less free and the current of the waters at the same time less rapid in its downward flow. It may be also that the rains are more frequent at its source in that season, because the etesian blasts of the north winds drive all the clouds together into those parts at that time. And, you are to know, when they have been driven on to the central region of day and have gathered together, then the clouds jammed close against the high mountains are massed together and violently compressed. Perhaps too it gets its increase high up from the lofty mountains of the Ethiopians, when the all-surveying sun with his thawing rays constrains the white snows to descend into the plains.

Now mark, and I will make clear to you what kind of nature the several Avernian places and lakes possess. First of all, as to the name Avernian by which they are called, it has been given to them from their real nature, because they are noxious to all birds; for when they have arrived in flight just opposite those spots, they forget to row with their wings, they drop their sails and fall with soft neck outstretched headlong to the earth, if so be that the nature of the ground admit of that, or into the water, if so be that a lake of Avernus spreads below. There

is locus est Cumas aput, acri sulphure montes
 oppleti calidis ubi fumant fontibus aucti.
 est et Athenaeis in moenibus, arcis in ipso
 vertice, Palladis ad templum Tritonidis almae, 750
 quo numquam pennis appellunt corpora raucae
 cornices, non cum fumant altaria donis:
 usque adeo fugitant non iras Palladis acris
 pervigili causa, Graium ut cecinere poetae,
 sed natura loci ope sufficit ipsa suapte. 755
 in Syria quoque fertur item locus esse videri,
 quadripedes quoque quo simul ac vestigia primum
 intulerint, graviter vis cogat concidere ipsa,
 manibus ut si sint divis mactata repente.
 omnia quae naturali ratione geruntur, 760
 et quibus effiant causis apparet origo;
 ianua ne forte his Orci regionibus esse
 credatur, post hinc animas Acheruntis in oras
 ducere forte deos manis inferne reamur,
 naribus alipedes ut cervi saepe putantur 765
 ducere de latebris serpentia saecula ferarum.
 quod procul a vera quam sit ratione repulsum
 percipe; nam de re nunc ipsa dicere conor.

is such a spot at Cumae, where the mountains are charged with acrid sulphur, and smoke enriched with hot springs. Such a spot there also is within the Athenian walls, on the very summit of the citadel, beside the temple of bountiful Tritonian Pallas; which croaking crows never come near on the wing; no not when the high altars smoke with offerings: so constantly they fly not before the sharp wrath of Pallas for the sake of yon vigil kept, as the poets of the Greeks have sung, but the nature of the place suffices by its own proper power. In Syria too as well a spot, we are told, is found to exist of such a sort that as soon as ever even fourfooted beasts have entered in, its mere natural power forces them to fall down heavily, just as if they were felled in a moment as sacrifices to the manes gods. Now all these things go on by a natural law, and it is quite plain whence spring the causes from which they are produced; that the gate of Orcus be not haply believed to exist in such spots; and next we imagine that the manes gods from beneath do haply draw souls down from them to the borders of Acheron; as wing-footed stags are supposed often by their scent to draw out from their holes the savage serpent-tribes. How widely opposed to true reason this is, now learn; for now I essay to tell of the real fact.

Principio hoc dico, quod dixi saepe quoque ante,
 in terra cuiusque modi rerum esse figuras; 770
 multa, cibo quae sunt, vitalia, multaque, morbos
 incutere et mortem quae possint adcelerare.
 et magis esse aliis alias animantibus aptas
 res ad vitae rationem ostendimus ante
 propter dissimilem naturam dissimilisque 775
 texturas inter sese primasque figuras.
 multa meant inimica per auris, multa per ipsas
 insinuant naris infesta atque aspera iactu,
 nec sunt multa parum tactu vitanda neque autem
 aspectu fugienda saporeque tristia quae sint. 780

Deinde videre licet quam multae sint homini res
 acriter infesto sensu spurcaeque gravesque;
 arboribus primum certis gravis umbra tributa
 usque adeo, capitis faciant ut saepe dolores,
 siquis eas sup̄er iacuit prostratus in herbis. 785
 est etiam magnis Heliconis montibus arbor
 floris odore hominem taetro consueta necare.
 scilicet haec ideo terris ex omnia surgunt,
 multa modis multis multarum semina rerum
 quod permixta gerit tellus discretaque tradit. 790

First of all I say, as I have often said before, that in the earth are elements of things of every kind: many, which serve for food, helpful to life; and many whose property it is to cause diseases and hasten death. And we have shewn before that one thing is more adapted to one, another thing to another living creature for the purposes of life because of their natures and their textures and their primary elements being all unlike the one to the other. Many which are noxious pass through the ears, many make their way too through the nostrils, which are dangerous and harsh when they come in contact; and not a few are to be shunned by the touch, and not a few to be avoided by the sight, and others nauseous in taste.

Again you may see how many things are for man of a virulently noxious sensation and are nauseous and oppressive; to certain trees for instance has been given so very oppressive a shade that they often cause headaches when a man has lain down under them extended on the grass. There is a tree too on the great hills of Helicon which has the property of killing a man by the noisome scent of its flower. All these things you are to know rise up out of the earth, because it contains many seeds of many things in many ways mixed up together and gives them out in

nocturnumque recens extinctum lumen ubi acri
 nidore offendit nares, consopit ibidem,
 concidere et spumas qui morbo mittere suevit.
 castoreoque gravi mulier sopita recumbit
 et manibus nitidum teneris opus effluit ei, 795
 tempore eo si odoratast quo menstrua solvit.
 multaque praeterea languentia membra per artus
 solvunt atque animam labefactant sedibus intus.
 denique si calidis etiam cunctare lavabris
 plenior et laveris, solio ferventis aquai 800
 quam facile in medio fit uti des saepe ruinas!
 carbonumque gravis vis atque odor insinuatur
 quam facile in cerebrum, nisi aquam praecepimus ante!
 at cum membra domus percepit fervidior vis,
 tum fit odor viri plagae mactabilis instar. 805
 nonne vides etiam terra quoque sulphur in ipsa
 gignier et taetro concreescere odore bitumen;
 denique ubi argenti venas aurique secuntur,
 terrai penitus scrutantes abdita ferro,
 qualis expiret Scaptensula subter odores? 810
 quidve mali fit ut exhalent aurata metalla!

a state of separation. Again when a newly extinguished night-light encounters the nostrils with its acrid stench, it sends to sleep then and there a man who from disease is subject to falling down and foaming at the mouth. A woman is put to sleep by oppressive castor and falls back in her seat, and her gay work drops out of her soft hands, if she has smelt it at the time when she has her monthly discharges. And many things besides relax through all the frame the fainting limbs and shake the soul in its seats within. Then too if you linger long in the hot baths when you are somewhat full and bathe, how liable you are to tumble down in a fit while seated in the midst of the hot water! Again how readily do the oppressive power and fumes of charcoal make their way into the brain, if we have not first taken water! But when burning with more than usual force it has filled the chambers of a house, then the fumes of the virulent substance act like a murderous blow. See you not too that even within the earth sulphur is generated and asphalt forms incrustations of a noisome stench? see you not, when they are following up the veins of silver and gold and searching with the pick quite into the bowels of the earth, what stench Scaptensula exhales from below? Then what mischief do gold mines exhale! to what state

quas hominum reddunt facies qualisque colores !
 nonne vides audisve perire in tempore parvo
 quam soleant et quam vitae copia desit,
 quos opere in tali cohibet vis magna necessis ? 815
 hos igitur tellus omnis exaestuat aestus
 expiratque foras in apertum promptaque caeli.

Sic et Averno loca alitibus summittere debent
 mortiferam vim, de terra quae surgit in auras,
 ut spatium caeli quadam de parte venenet ; 820
 quo simul ac primum pennis delata sit ales,
 impediatur ibi caeco correpta veneno,
 ut cadat e regione loci, qua derigit aestus.
 quo cum conruit, hic eadem vis illius aestus
 reliquias vitae membris ex omnibus aufert. 825
 quippe etenim primo quasi quendam conciet aestum ;
 posterius fit uti, cum iam cecidere veneni
 in fontis ipsos, ibi sit quoque vita vomenda
 propterea quod magna mali fit copia circum.

Fit quoque ut interdum vis haec atque aestus Averno 830
 aera, qui inter avis cumquest terramque locatus,
 discutiat, prope uti locus hic linguatur inanis.
 cuius ubi e regione loci venere volantes,

do they reduce men's faces and what a complexion it produces in them !
 Know you not by sight or hearsay how they commonly perish in a short
 time and how all vital power fails those whom the hard compulsion of
 necessity confines in such an employment ? All such exhalations then
 the earth steams forth and breathes out into the open air and light of
 heaven.

Thus too the Avernian spots must send up some power deadly to
 birds, which rises up from the earth into the air so as to poison a certain
 portion of the atmosphere ; in such a way that as soon as ever a bird is
 borne on his wings into it, it is then attacked by the unseen poison and
 so palsied that it tumbles plump down on the spot where this exhalation
 has its course. And when it falls into it, then the same power of that
 exhalation robs all its limbs of the remnants of life : first of all it causes
 a sort of dizziness ; but afterwards, when the birds have tumbled into the
 very springs of the poison, then life too has to be vomited forth, because
 all round rises up large store of mischievous matter.

Sometimes too this power and exhalation of Avernus dispels what-
 ever air lies between the birds and earth, so that almost a void is left
 there. And when the birds have arrived in their flight just opposite

claudicat extemplo pinnarum nisus inanis
 et conamen utrimque alarum proditur omne. 835
 hic ubi nixari nequeunt insistereque alis,
 scilicet in terram delabi pondere cogit
 natura, et vacuum prope iam per inane iacentes
 dispergunt animas per caulas corporis omnis.

*

frigidior porro in puteis aestate fit umor, 840
 rarescit quia terra calore et semina siquae
 forte vaporis habet, propere dimittit in auras,
 quo magis est igitur tellus effeta calore,
 fit quoque frigidior qui in terrast abditus umor.
 frigore cum premitur porro omnis terra coitque 845
 et quasi concrescit, fit scilicet ut coeundo
 exprimat in puteos siquem gerit ipsa calorem.

Esse apud Hammonis fanum fons luce diurna
 frigidus et calidus nocturno tempore fertur.
 hunc homines fontem nimis admirantur et acri 850
 sole putant sup̄ter terras ferverescere raptim,
 nox ubi terribili terras caligine texit.
 quod nimis a verast longe ratione remotum.
 quippe ubi sol nudum contractans corpus aquai

this spot, at once the buoyant force of their pinions is crippled and rendered vain and all the sustaining efforts of their wings are lost on both sides. So when they are unable to buoy themselves up and lean upon their wings, nature, you know, compels them by their weight to tumble down to earth, and lying stark through what is now almost a void they disperse their souls through all the openings of their body. * * Again during summer the water in wells becomes colder, because the earth is rarefied by heat and sends out into the air whatever seeds of its own proper heat it happens to have. The more then the earth is drained of heat, the colder becomes the water which is hidden in the earth. Again when all the earth is compressed by cold and contracts and so to say congeals, it then, you are to know, while it contracts, presses out into the wells whatever heat it contains itself.

At the fane of Hammon there is said to be a fountain which is cold in the daylight and hot in the night-time. This fountain men marvel at exceedingly and suppose that it suddenly becomes hot by the influence of the fierce sun below the earth, when night has covered the earth with awful darkness. But this is far far removed from true reason. Why when the sun though in contact with the uncovered body of the water

non quierit calidum supera de reddere parte, 855
 cum superum lumen tanto fervore fruatur,
 qui queat hic sup̄ter tam crasso corpore terram
 percoquere umorem et calido satiare vapore?
 praesertim cum vix possit per saepta domorum
 insinuare suum radiis ardentibus aestum. 860
 quae ratio est igitur? nimirum terra magis quod
 rara tepet circum fontem quam cetera tellus
 multaque sunt ignis prope semina corpus aquai.
 hoc ubi roriferis terram nox obruit umbris,
 extemplo penitus frigescit terra coitque. 865
 hac ratione fit ut, tamquam compressa manu sit,
 exprimat in fontem quae semina cumque habet ignis,
 quae calidum faciunt aquae tactum atque saporem.
 inde ubi sol radiis terram dimovit obortus
 et rarefecit calido gliscente vapore, 870
 rursus in antiquas redeunt primordia sedes
 ignis et in terram cedit calor omnis aquai.
 frigidus hanc ob rem fit fons in luce diurna.
 praeterea solis radiis iactatur aquai
 umor et in lucem tremulo rarescit ab aestu; 875
 propterea fit uti quae semina cumque habet ignis
 dimittat; quasi saepe gelum, quod continet in se,

has not been able to make it hot on its upper side, though his light above possesses such great heat, how can he below the earth which is of so dense a body boil the water and glut it with heat? above all when he can scarcely with his burning rays force his heat through the walls of houses. What then is the cause? this sure enough: the earth is more porous and warmer round the fountain than the rest of the earth, and there are many seeds of fire near the body of water. For this reason when night has buried the earth in its dewy shadows, the earth at once becomes quite cold and contracts: in this way just as if it were squeezed by the hand it forces out into the fountain whatever seeds of fire it has; and these make the water hot to the touch and taste. Next when the sun has risen and with his rays has loosened the earth and has rarefied it as his heat waxes stronger, the first-beginnings of fire return back to their ancient seats and all the heat of the water withdraws into the earth: for this reason the fountain becomes cold in the daylight. Again the liquid of water is played upon by the sun's rays and in the light is rarefied by his throbbing heat; and therefore it gives up whatever seeds of

mittit et exolvit glaciem nodosque relaxat.

Frigidus est etiam fons, supra quem sita saepe
 stuppa iacit flammam concepto protinus igni, 880
 taedaeque consimili ratione accensa per undas
 conlucet, quocumque natans impellitur auris.
 nimirum quia sunt in aqua permulta vaporis
 semina de terraque necessest funditus ipsa
 ignis corpora per totum consurgere fontem 885
 et simul exspirare foras exireque in auras,
 non ita multa tamen, calidus queat ut fieri fons,
 propterea dispersa foras erumpere cogit
 vis per aquam subito sursumque ea conciliari.
 quod genus endo marist Aradi fons, dulcis aquai 890
 qui scatit et salsas circum se dimovet undas;
 et multis aliis praebet regionibus aequor
 utilitatem opportunam sitientibu' nautis,
 quod dulcis inter salsas intervomit undas.
 sic igitur per eum possunt erumpere fontem 895
 et scatere illa foras in stuppam semina; quo cum
 conveniunt aut in taedai corpore adhaerent,
 ardescunt facile extemplo, quia multa quoque in se
 semina habent ignis stuppae taedaeque latentis.

fire it has; just as it often parts with the frost which it holds in itself, and thaws the ice and loosens its bonds.

There is also a cold fountain of such a nature that tow often when held over it imbibes fire forthwith and emits flame; a pine torch too is lighted and shines among the waters, in whatever direction it swims under the impulse of the winds. Because sure enough there are in the water very many seeds of heat, and from the earth itself at the bottom must rise up bodies of fire throughout the whole fountain and at the same time pass abroad in exhalations and go forth into the air, not in such numbers however that the fountain can become hot, for these reasons a force compels those seeds to burst out through the water and disperse abroad and to unite when they have mounted up. In the sea at Aradus is a fountain of this kind, which wells up with fresh water and keeps off the salt waters all round it; and in many other quarters the sea affords a seasonable help in need to thirsting sailors, vomiting forth fresh waters amid the salt. In this way then those seeds may burst forth through that fountain and well out into the tow. And when they meet together in it or cohere in the body of the pine-torch, they at once readily take fire, because the tow and pinewood contain in them likewise many seeds of latent fire. See you not too that, when you bring

nonne vides etiam, nocturna ad lumina linum 900
 nuper ubi extinctum admoveas, accendier ante
 quam tetigit flammam, taedamque pari ratione?
 multaque praeterea prius ipso tacta vapore
 eminus ardescunt quam comminus imbuat ignis.
 hoc igitur fieri quoque in illo fonte putandumst. 905

Quod superest, agere incipiam quo foedere fiat
 naturae, lapis hic ut ferrum ducere possit,
 quem Magneta vocant patrio de nomine Grai,
 Magnetum quia fit patriis in finibus ortus.
 hunc homines lapidem mirantur; quippe catenam 910
 saepe ex anellis reddit pendentibus ex se.
 quinque etenim licet interdum pluresque videre
 ordine demissos levibus iactarier auris,
 unus ubi ex uno dependet sup̄ter adhaerens
 ex alioque alius lapidis vim vinclaque noscit: 915
 usque adeo permananter vis pervolat eius.

Hoc genus in rebus firmandumst multa prius quam
 ipsius rei rationem reddere possis,
 et nimium longis ambagibus est adeundum;
 quo magis attentas auris animumque reposco. 920

Principio omnibus ab rebus, quascumque videmus,

a newly extinguished wick near night-lamps, it catches light before it has touched the flame; and the same with the pinewood? And many things beside catch fire at some distance touched merely by the heat, before the fire in actual contact infects them. This therefore you must suppose to take place in that fountain.

Next in order I will proceed to discuss by what law of nature it comes to pass that iron can be attracted by that stone which the Greeks call the Magnet from the name of its native place, because it has its origin within the bounds of the country of the Magnesians. This stone men wonder at; as it often produces a chain of rings hanging down from it. Thus you may see sometimes five and more suspended in succession and tossing about in the light airs, one always hanging down from one and attached to its lower side, and each in turn one from the other experiencing the binding power of the stone: with such a continued current its force flies through all.

In things of this kind many points must be established before you can assign the true law of the thing in question, and it must be approached by a very circuitous road; wherefore all the more I call for an attentive ear and mind.

In the first place from all things whatsoever which we see there

- perpetuo fluere ac mitti spargique necessest
 corpora quae feriant oculos visumque laccessant.
 perpetuoque fluunt certis ab rebus odores;
 frigus ut *a* fluviis, calor ab sole, aestus ab undis 925
 aequoris exesor moerorum litora propter.
 nec varii cessant sonitus manare per auras.
 denique in os salsi venit umor saepe saporis,
 cum mare versamur propter, dilutaque contra
 934 cum tuimur misceri absinthia, tangit amaror. 930
 usque adeo omnibus ab rebus res quaeque fluenter
 930 fertur et in cunctas dimittitur undique partis
 nec mora nec requies interdatur ulla fluendi,
 perpetuo quoniam sentimus, et omnia semper
 cernere odorari licet et sentire sonare. 935
 936 Nunc omnis repetam quam raro corpore sint res
 commemorare; quod in primo quoque carmine claret.
 quippe etenim, quamquam multas hoc pertinet ad res
 noscere, cum primis hanc ad rem protinus ipsam,
 qua de disserere adgredior, firmare necessest 940
 nil esse in promptu nisi mixtum corpus inani.
 principio fit ut in speluncis saxa superne
 sudent umore et guttis manantibu' stillent.

must incessantly stream and be discharged and scattered abroad such bodies as strike the eyes and provoke vision. Smells too incessantly stream from certain things; as does cold from rivers, heat from the sun, spray from the waves of the sea, that eater into walls near the shore. Various sounds too cease not to stream through the air. Then a moist salt flavour often comes into the mouth, when we are moving about beside the sea; and when we look on at the mixing of a decoction of wormwood, its bitterness affects us. In such a constant stream from all these things the several qualities of things are carried and are transmitted in all directions round, and no delay, no respite in the flow is ever granted, since we constantly have feeling, and may at any time see smell and hear the sound of anything.

And now I will state once again how rare a body all things have: a question made clear in the first part of my poem also: although the knowledge of this is of importance in regard to many things, above all in regard to this very question which I am coming to discuss, at the very outset it is necessary to establish that nothing comes under sense save body mixed with void. For instance in caves rocks overhead sweat with moisture and trickle down in oozing drops. Sweat too oozes out

manat item nobis e toto corpore sudor,
 crescit barba pilique per omnia membra, per artus. 945
 diditur in venas cibus omnis, auget alitque
 corporis extremas quoque partis unguiculosque.
 frigus item transire per aes calidumque vaporem
 sentimus, sentimus item transire per aurum
 atque per argentum, cum pocula plena tenemus. 950
 denique per dissaepa domorum saxea voces
 pervolitant, permanat odor frigusque vaposque
 ignis, qui ferri quoque vim penetrare suëvit
 denique qua circum Galli lorica coercet.
 956 et tempestates terra caeloque coortae 955
 in caelum terrasque remotae iure facessunt,
 955 morbida visque simul, cum extrinsecus insinuatur;
 958 quandoquidem nil est nisi raro corpori' nexu.
 Huc accedit uti non omnia, quae iaciuntur
 corpora cumque ab rebus, eodem praedita sensu 960
 atque eodem pacto rebus sint omnibus apta.
 principio terram sol excoquit et facit are,
 at glaciem dissolvit et altis montibus altas
 extructasque nives radiis tabescere cogit.
 denique cera liquefit in eius posta vapore. 965
 ignis item liquidum facit aes aurumque resolvit,

from our whole body; the beard grows and hairs over all our limbs and frame. Food is distributed through all the veins, gives increase and nourishment to the very extremities and nails. We feel too cold and heat pass through brass, we feel them pass through gold and silver, when we hold full cups. Again voices fly through the stone partitions of houses; smell passes through and cold and the heat of fire, which is wont ay to pierce even the strength of iron, where the Gaulish cuirass girds the body round. And storms that have gathered in earth and heaven with good right withdraw and take their departure respectively to heaven and earth, and along with them the influence of disease, when it makes its way in from without; since there is nothing at all that is not of a rare texture of body.

Furthermore all bodies whatever which are discharged from things are not qualified to excite the same sensations nor are adapted for all things alike. The sun for instance bakes and dries up the earth, but thaws ice, and forces the snows piled up high on the high hills to melt away beneath his rays; wax again turns to liquid when placed within reach of his heat. Fire also melts brass and fuses gold, but shrivels up

at coria et carnem trahit et conducit in unum.
 umor aquae porro ferrum condurat ab igni,
 at coria et carnem mollit durata calore.
 barbigeras oleaster eo iuvat usque capellas, 970
 effluat ambrosiae quasi vere et nectari' linctus;
 qua nil est homini quod amariu' frondeat esca.
 denique amaracinum fugitat sus et timet omne
 ungentum; nam saetigeris subus acre venenumst,
 quod nos interdum tamquam recreare videtur. 975
 at contra nobis caenum taeterrima cum sit
 spurcities, eadem subus haec iucunda videtur,
 insatiabiliter toti ut volvantur ibidem.

Hoc etiam superest, ipsa quam dicere de re
 adgredior quod dicendum prius esse videtur. 980
 multa foramina cum variis sint reddita rebus,
 dissimili inter se natura praedita debent
 esse et habere suam naturam quaeque viasque.
 quippe etenim varii sensus animantibus insunt,
 quorum quisque suam proprie rem percipit in se; 985
 nam penetrare alio sonitus alioque saporem
 cernimus e sucis, alio nidoris odores.
 991 praeterea manare aliud per saxa videtur, 990
 atque aliud lignis, aliud transire per aurum,

and draws together hides and flesh. The liquid of water after fire hardens steel, but softens hides and flesh hardened by heat. The wild olive delights the bearded she-goats as much as if the flavour of ambrosia and nectar in truth streamed from it; but nothing that puts forth leaf is more bitter to man than this food. Again a swine eschews marjoram-oil and dreads all perfumes; for they are rank poison to bristly swine, though they are found at times to give us as it were fresh life. But on the other hand though mire is to us the nastiest filth, it is found to be so welcome to swine that they wallow in it all over with a craving not to be satisfied.

There is still one point left which it seems proper to mention, before I come to speak of the matter in hand. Since many pores are assigned to various things, they must possess natures differing the one from the other and must have each its own nature, its own direction: thus there are in living creatures various senses, each of which takes into it in its own peculiar way its own special object; for we see that sounds pass into one thing, taste from different flavours into another thing, smells into another. Again one thing is seen to stream through stones and another thing to pass through woods, another through gold, and another still to go out

argentoque foras aliud vitroque meare.
 nam fluere hac species, illac calor ire videtur,
 995 atque aliis aliut citius transmittere eadem.
 scilicet id fieri cogit natura viarum 995
 multimodis varians, ut paulo ostendimus ante,
 990 propter dissimilem naturam textaque rerum.
 998 Quapropter, bene ubi haec confirmata atque locata
 omnia constiterint nobis praeposta parata,
 quod superest, facile hinc ratio reddetur et omnis 1000
 causa patefiet quae ferri pelliciat-vim.
 principio fluere e lapide hoc permulta necessest
 semina sive aestum qui discutit aera plagis,
 inter qui lapidem ferrumque est cumque locatus.
 hoc ubi inanitur spatium multusque vacefit 1005
 in medio locus, extemplo primordia ferri
 in vacuum prolapsa cadunt coniuncta, fit utque
 anulus ipse sequatur eatque ita corpore toto.
 nec res ulla magis primoribus *ex* elementis
 indupedita suis arte conexa cohaeret 1010
 quam validi ferri natura et frigidus horror.
 quo minus est mirum, quod dico, ibus ex elementis
 corpora si nequeunt e ferro plura coorta

through silver and brass; for form is seen to stream through this passage, heat through that, and one thing is seen to pass through by the same way more quickly than other things. The nature of the passages, you are to know, compels it so to be, varying in manifold wise, as we have shewn a little above, owing to the unlike natures and textures of things.

Therefore now that these points have all been established and arranged for us as premisses ready to our hand, for what remains, the law will readily be explained out of them, and the whole cause be laid open which attracts the strength of iron. First of all there must stream from this stone very many seeds or a current if you will which dispels with blows all the air which lies between the stone and iron. When this space is emptied and much room left void between, forthwith the first-beginnings of iron fall headlong forward into the void in one body, and in consequence the ring itself follows and then goes on with its whole body. And nothing has its primal elements more intricately entangled or coheres in closer connexion than the nature of stubborn iron and its coldness that makes you shiver. Therefore what I say is the less strange, that from among such elements as these bodies cannot gather in large numbers out of the iron and be carried into the void without the whole

- in vacuum ferri, quin anulus ipse sequatur;
 quod facit, et sequitur, donec pervenit ad ipsum 1015
 iam lapidem caecisque in eo compagibus haesit.
 hoc fit idem cunctas in partis, unde vacefit
 cumque locus, sive e transverso sive superne
 corpora continuo in vacuum vicina feruntur;
 quippe agitantur enim plagis aliunde nec ipsa 1020
 sponte sua sursum possunt consurgere in auras.
 huc accedit item (quare queat id magis esse,
 haec quoque res adiumento motuque iuvatur)
 quod, simul a fronte est anelli rarior aer
 factus inanitusque locus magis ac vacuatus, 1025
 1033 continuo fit uti qui post est cumque locatus
 1026 aer a tergo quasi provehat atque propellat.
 semper enim circumpositus res verberat aer;
 sed tali fit uti propellat tempore ferrum,
 parte quod ex una spatium vacat et capit in se. 1030
 1030 hic, tibi quem memoro, per crebra foramina ferri
 parvas ad partis subtiliter insinuatus
 trudit et inpellit, quasi navem velaque ventus.
 1034 denique res omnes debent in corpore habere
 aera, quandoquidem raro sunt corpore et aer 1035
 omnibus est rebus circumdatus adpositusque.
 hic igitur, penitus qui in ferrost abditus aer,

ring following. This it does do, and follows on until it has quite reached the stone and fastened on it with unseen bonds of connexion. The same thing takes place in all directions: on whatever side a void is formed, whether athwart or from above the first bodies next it are at once carried on into the void; for they are set in motion by blows from another source and cannot by their own free will rise up into the air. Moreover (to render it more feasible, this thing also is helped on by external aid and motion) as soon as the air in front of the ring has been made rarer and the space more empty and void, it follows at once that all the air which lies behind, carries and pushes it on as it were at its back. For the air which lies around them always beats on things; but at such a time as this it is able to push on the iron, because on one side a space is void and receives the iron into it. This air of which I am speaking to you makes its way with much subtlety through the frequent pores of the iron to its minute parts and then thrusts and pushes it on, as the wind a ship and its sails. Again all things must have air in their body, since they are of a rare body and air surrounds and is in contact with all things. This air therefore which is in the inmost recesses of the

sollicito motu semper iactatur eoque
 verberat anellum dubio procul et ciet intus
 scilicet: ille eodem fertur quo praecipitavit 1040
 iam semel et partem in vacuum conamina sumpsit.

Fit quoque ut a lapide hoc ferri natura recedat
 interdum, fugere atque sequi consueta vicissim.
 exultare etiam Samothracia ferrea vidi
 et ramenta simul ferri furere intus ahenis 1045
 in scaphiis, lapis hic Magnes cum subditus esset:
 usque adeo fugere ab saxo gestire videtur.
 aere interposito discordia tanta creatur
 propterea quia nimirum prius aestus ubi aeris
 praecepit ferrique vias possedit apertas, 1050
 posterior lapidis venit aestus et omnia plena
 invenit in ferro neque habet qua tranet ut ante.
 cogitur offensare igitur pulsareque fluctu
 ferrea texta suo; quo pacto respuit ab se
 atque per aes agitat, sine eo quod saepe resorbet. 1055
 illud in his rebus mirari mitte, quod aestus
 non valet e lapide hoc alias impellere item res.
 pondere enim fretae partim stant: quod genus aurum;
 et partim raro quia sunt cum corpore, ut aestus

iron, is ever stirred in restless motion and therefore beats the ring without a doubt and stirs it within, you know: the ring is carried in the direction in which it has once plunged forward, and into the void part towards which it has made its start.

Sometimes too it happens that the nature of iron is repelled from this stone, being in the habit of flying from and following it in turns. I have seen Samothracian iron rings even jump up, and at the same time filings of iron rave within brass basins, when this Magnet stone had been placed under: such a strong desire the iron seems to have to fly from the stone. So great a disturbance is raised by the interposition of the brass, because sure enough when the current of the brass has first seized on and taken possession of the open passages of the iron, the current of the stone comes after and finds all things full in the iron and has no opening to swim through as before. It is forced therefore to dash against and beat with its wave the iron texture; by which means it repels from it and sets in motion through the brass that which without the brass it often draws to itself. And forbear herein to wonder that the current from this stone is not able to set in motion other things as well as iron: some of these stand still by the power of their own weight; for instance gold; and others, because they are of so rare a body that the current flies through

pervolet intactus, nequeunt inpellier usquam; 1060
 lignea materies in quo genere esse videtur.
 interutraque igitur ferri natura locata
 aeris ubi accepit quaedam corpuscula, tum fit,
 inpellant ut eam Magnesia flumine saxa.

Nec tamen haec ita sunt aliarum rerum aliena, 1065
 ut mihi multa parum genere ex hoc suppeditentur
 quae memorare queam inter se singlariter apta.
 saxa vides primum sola colescere calce.
 glutine materies taurino iungitur uno,
 ut vitio venae tabularum saepius hiscant 1070
 quam laxare queant compages taurea vincla.
 vitigeni latices aquiai fontibus audent
 misceri, cum pix nequeat gravis et leve olivom.
 purpureusque colos conchyli iungitur uno
 corpore cum lanae, dirimi qui non queat usquam, 1075
 non si Neptuni fluctu renovare operam des,
 non, mare si totum velit eluere omnibus undis.
 denique non auro res aurum copulat una
 aerique aes plumbo fit uti iungatur ab albo?
 cetera iam quam multa licet reperire! quid ergo? 1080
 nec tibi tam longis opus est ambagibus usquam,

them uninterrupted, cannot in any case be set in motion; to which class wood is found to belong. When therefore the nature of iron lying between the two has received into it certain first bodies of brass, then do the Magnet stones set it in motion with their stream.

And yet these cases are not so much at variance with other things, that I have only a scanty store of similar instances to relate of things mutually fitted one for the other and for nothing else: stones for instance you see are cemented by mortar alone; wood is united with wood so firmly by bulls' glue only, that the veins of boards often gape in cracks before the binding power of the glue can be brought to loosen its hold. Vine-born juices venture to mix with streams of water, though heavy pitch and light oil cannot. Again the purple dye of the shellfish so unites with the body of wool alone, that it cannot in any case be severed, not were you to take pains to undo what is done with Neptune's wave, not if the whole sea were willed to wash it out with all its waters. Then too is there not one thing only that fastens gold to gold, and is not brass soldered to brass by tin? and how many other cases of the kind might one find! what then? you have no need whatever of such long cir-

nec me tam multam hic operam consumere par est,
 sed breviter paucis praestat comprehendere multa.
 quorum ita texturae ceciderunt mutua contra,
 ut cava convenient plenis haec illius illa 1085
 huiusque inter se, iunctura haec optima constat.
 est etiam, quasi ut anellis hamisque plicata
 inter se quaedam possint coplata teneri;
 quod magis in lapide hoc fieri ferroque videtur.

Nunc ratio quae sit morbis aut unde repente 1090
 mortiferam possit cladem conflare coorta
 morbida vis hominum generi pecudumque catervis,
 expediam. primum multarum semina rerum
 esse supra docui quae sint vitalia nobis,
 et contra quae sint morbo mortique necessest 1095
 multa volare. ea cum casu sunt forte coorta
 et perturbarunt caelum, fit morbidus aer.
 atque ea vis omnis morborum pestilitasque
 aut extrinsecus ut nubes nebulaeque superne
 per caelum veniunt, aut ipsa saepe coortae 1100
 de terra surgunt, ubi putorem umida nactast
 intempestivis pluviisque et solibus icta.
 nonne vides etiam caeli novitate et aquarum

cuitous roads, nor is it worth my while to spend so much pains on this, but it is better briefly to comprise many things in few words: things whose textures have such a mutual correspondence, that cavities fit solids, the cavities of the first the solids of the second, the cavities of the second the solids of the first, form the closest union. Again some things may be fastened together and held in union with hooks and eyes as it were; and this seems rather to be the case with this stone and iron.

And now I will explain what the law of diseases is and from what causes the force of disease may suddenly gather itself up and bring death-dealing destruction on the race of man and the troops of brute beasts. And first I have shown above that there are seeds of many things helpful to our life; and on the other hand many must fly about conducing to disease and death. When these by chance have happened to gather together and have disordered the atmosphere, the air becomes distempered. And all that force of disease and that pestilence come either from without down through the atmosphere in the shape of clouds and mists, or else do gather themselves up and rise out of the earth, when soaked with wet it has contracted a taint, being beaten upon by unseasonable rains and suns. See you not too that all who come to a place far away from

temptari procul a patria quicumque domoque
 adveniunt ideo quia longe discrepant res? 1105
 nam quid Brittanni caelum differre putamus,
 et quod in Aegypto est qua mundi claudicat axis,
 quidve quod in Ponto est differre, et Gadibus atque
 usque ad nigra virum percocto saecla colore?
 quae cum quattuor inter se diversa videmus 1110
 quattuor a ventis et caeli partibus esse,
 tum color et facies hominum distare videntur
 largiter et morbi generatim saecla tenere.
 est elephas morbus qui propter flumina Nili
 gignitur Aegypto in media neque praeterea usquam. 1115
 Atthide temptantur gressus oculique in Achaeis
 finibus. inde aliis alius locus est inimicus
 partibus ac membris: varius concinnat id aer.
 proinde ubi se caelum quod nobis forte alienum
 commovet atque aer inimicus serpere coepit, 1120
 ut nebula ac nubes paulatim repit et omne
 qua graditur conturbat et immutare coactat;
 fit quoque ut, in nostrum cum venit denique caelum,
 corrumpat reddatque sui simile atque alienum.
 haec igitur subito clades nova pestilitasque 1125

country and home are affected by the strangeness of climate and water, because there are wide differences in such things? for what a difference may we suppose between the climate of the Briton and that of Egypt where the pole of heaven slants askew, and again between that in Pontus and that of Gades and so on to the races of men black with sun-baked complexion? Now as we see these four climates under the four opposite winds and quarters of heaven all differing from each other, so also the complexions and faces of the men are seen to differ widely and diseases varying in kind are found to seize upon the different races. There is the elephant disease which is generated beside the streams of Nile in the midst of Egypt and nowhere else. In Attica the feet are attacked and the eyes in Achaean lands. And so different places are hurtful to different parts and members: the variations of air occasion that. Therefore when an atmosphere which happens to put itself in motion unsuited to us and a hurtful air begin to advance, they creep slowly on in the shape of mist and cloud and disorder everything in their line of advance and compel all to change; and when they have at length reached our atmosphere, they corrupt it too and make it like to themselves and unsuited to us. This new destroying power and pestilence therefore either fall

aut in aquas cadit aut fruges persidit in ipsas
 aut alios hominum pastus pecudumque cibatus,
 aut etiam suspensa manet vis aere in ipso
 et, cum spirantes mixtas hinc ducimus auras,
 illa quoque in corpus pariter sorbere necessest. 1130
 consimili ratione venit bubus quoque saepe
 pestilitas et iam pigris balantibus aegror.
 nec refert utrum nos in loca deveniamus
 nobis adversa et caeli mutemus amictum,
 an caelum nobis ultro natura *alienum* 1135
 deferat aut aliquid quo non consuevimus uti,
 quod nos adventu possit temptare recenti.

Haec ratio quondam morborum et mortifer aestus
 finibus in Cecropis funestos reddidit agros
 vastavitque vias, exhausit civibus urbem. 1140
 nam penitus veniens Aegypti finibus ortus,
 aera permensus multum camposque natantis,
 incubuit tandem populo Pandionis omnei.
 inde catervatim morbo mortique dabantur.
 principio caput incensum fervore gerebant 1145
 et duplicis oculos suffusa luce rubentes.
 sudabant etiam fauces intrinsecus atrae

upon the waters or else sink deep into the corn-crops or other food of man and provender of beast; or else their force remains suspended within the atmosphere, and when we inhale from it mixed airs, we must absorb at the same time into our body those things as well. In like manner pestilence often falls on kine too and a distemper on the silly sheep. And it makes no difference whether we travel to places unfavourable to us and change the atmosphere which wraps us round, or whether nature without our choice brings to us an atmosphere unsuited to us or something to the use of which we have not been accustomed, and which is able to attack us on its first arrival.

Such a form of disease and a death-fraught miasm erst within the borders of Cecrops defiled the whole land with dead, and dispeopled the streets, drained the town of burghers. Rising first and starting from the inmost corners of Egypt, after traversing much air and many floating fields, the plague brooded at last over the whole people of Pandion; and then they were handed over in troops to disease and death. First of all they would have the head seized with burning heat and both eyes blood-shot with a glare diffused over: the livid throat within would exude blood and the passage of the voice be clogged and choked with

sanguine et ulceribus vocis via saepta coibat
 atque animi interpret manabat lingua cruore
 debilitata malis, motu gravis, aspera tactu. 1150
 inde ubi per fauces pectus complerat et ipsum
 morbida vis in cor maestum confluxerat aegris,
 omnia tum vero vitae claustra lababant.
 spiritus ore foras taetrum volvebat odorem,
 rancida quo perolent proiecta cadavera ritu. 1155
 atque animi prorsum *tum* vires totius, omne
 languebat corpus leti iam limine in ipso.
 intolerabilibusque malis erat anxius angor
 adsidue comes et gemitu commixta querella.
 singultusque frequens noctem per saepe diemque 1160
 corripere adsidue nervos et membra coactans
 dissoluebat eos, defessos ante, fatigans.
 nec nimio cuiquam posses ardore tueri
 corporis in summo summam fervere partem,
 sed potius tepidum manibus proponere tactum 1165
 et simul ulceribus quasi inustis omne rubere
 corpus, ut est per membra sacer dum diditur ignis.
 intima pars hominum vero flagrabat ad ossa,
 flagrabat stomacho flamma ut fornacibus intus.
 nil adeo posses cuiquam leve tenveque membris 1170

ulcers, and the mind's interpreter the tongue drip with gore, quite enfeebled with sufferings, heavy in movement, rough to touch. Next when the force of disease passing down the throat had filled the breast and had streamed together even into the sad heart of the sufferers, then would all the barriers of life give way. The breath would pour out at the mouth a noisome stench, even as the stench of rotting carcasses thrown out unburied. And then the powers of the entire mind, the whole body would sink utterly, now on the very threshold of death. And a bitter bitter despondency was the constant attendant on insufferable ills and complaining mingled with moaning. An ever-recurring hiccup often the night and day through, forcing on continual spasms in sinews and limbs, would break men quite, forwearying those forspent before. And yet in none could you perceive the skin on the surface of the body burn with any great heat, but the body would rather offer to the hand a lukewarm sensation and at the same time be red all over with ulcers burnt into it so to speak, as happens when the holy fire is spreading over the frame. The inward parts of the men however would burn to the very bones, a flame would burn within the stomach as within furnaces. Nothing was light and thin enough to apply to the relief of

- vertere in utilitatem, at ventum et frigora semper.
 in fluvios partim gelidos ardentia morbo
 membra dabant nudum iacentes corpus in undas.
 1178 multi praecipites lymphis putealibus alte
 1174 inciderunt ipso venientes ore patente: 1175
 insedabiliter sitis arida, corpora mersans,
 aequabat multum parvis umoribus imbrem.
 nec requies erat ulla mali: defessa iacebant
 1179 corpora. mussabat tacito medicina timore,
 quippe patentia cum totiens ardentia morbis 1180
 lumina versarent oculorum expertia somno.
 multaque praeterea mortis tum signa dabantur,
 perturbata animi mens in maerore metuque,
 triste supercilium, furiosus voltus et acer,
 sollicitae porro plenaequae sonoribus aures, 1185
 creber spiritus aut ingens raroque coortus,
 sudorisque madens per collum splendidus umor,
 tenvia sputa minuta, croci contacta colore
 salsaque, per fauces raucas vix edita tussi.
 in manibus vero nervi trahere et tremere artus 1190
 a pedibusque minutatim succedere frigus
 non dubitabat. item ad supremum denique tempus
 conpressae nares, nasi primoris acumen

the body of any one; ever wind and cold alone. Many would plunge their limbs burning with disease into the cool rivers, throwing their body naked into the water. Many tumbled headforemost deep down into the wells, meeting the water even with mouth wide-agape. Parching thirst with a craving not to be appeased, drenching their bodies, would make an abundant draught no better than the smallest drop. No respite was there of ill: their bodies would lie quite spent. The healing art would mutter low in voiceless fear, as again and again they rolled about their eye-balls wide open, burning with disease, never visited by sleep. And many symptoms of death besides would then be given, the mind disordered in sorrow and fear, the clouded brow, the fierce delirious expression, the ears too troubled and filled with ringings, the breathing quick or else strangely loud and slow-recurring, and the sweat glistening wet over the neck, the spittle in thin small flakes, tinged with a saffron-colour, salt, scarce forced up the rough throat by coughing. The tendons of the hands ceased not to contract, the limbs to shiver, a coldness to mount with slow sure pace from the feet upwards. Then at their very last moments they had nostrils pinched, the tip of the nose sharp, eyes

tenve, cavati oculi, cava tempora, frigida pellis
 duraque, in ore trucei rictum, frons tenta *tumebat*. 1195
 nec nimio rigidi post artus morte iacebant.
 octavoque fere candenti lumine solis
 aut etiam nona reddebant lampade vitam.
 quorum siquis ibei vitarat funera leti,
 ulceribus taetris et nigra proluvie alvi 1200
 posterius tamen hunc tabes letumque manebat,
 aut etiam multus capitis cum saepe dolore
 corruptus sanguis expletis naribus ibat:
 huc hominis totae vires corpusque fluebat.
 profluvium porro qui taetri sanguinis acre 1205
 exierat, tamen in nervos huic morbus et artus
 ibat et in partis genitalis corporis ipsas.
 et graviter partim metuentes limina leti
 vivebant ferro privati parte virili,
 et manibus sine nonnulli pedibusque manebant 1210
 in vita tamen, et perdebant lumina partim:
 usque adeo mortis metus his incesserat acer.
 atque etiam quosdam cepere obliviam rerum
 cunctarum, neque se possent cognoscere ut ipsi.
 multaue humi cum inhumata iacerent corpora supra 1215
 corporibus, tamen alituum genus atque ferarum

deep-sunk, temples hollow, the skin cold and hard, on the grim mouth a grin, the brow tense and swollen; and not long after their limbs would be stretched stiff in death: about the eighth day of bright sunlight or else on the ninth return of his lamp they would yield up life. And if any of them at that time had shunned the doom of death, yet in after time consumption and death would await him from noisome ulcers and the black discharge of the bowels, or else a quantity of purulent blood accompanied by headache would often pass out by the gorged nostrils: into these the whole strength and substance of the man would stream. Then too if any one had escaped the acrid discharge of noisome blood, the disease would yet pass into his sinews and joints and onward even into the sexual organs of the body; and some from excessive dread of the gates of death would live bereaved of these parts by the knife; and some though without hands and feet would continue in life, and some would lose their eyes: with such force had the fear of death attacked them. And some were seized with such forgetfulness that they did not know themselves. And though bodies lay in heaps above bodies unburied on the ground, yet would the race of birds and beasts either scour

aut procul apsiliebat, ut acrem exeiret odorem,
 aut, ubi gustarat, languebat morte propinqua.
 nec tamen omnino temere illis solibus ulla
 comparebat avis, nec *tristia* saecla ferarum 1220
 exeibant silvis. languebant pleraque morbo
 et moriebantur. cum primis fida canum vis
 strata viis animam ponebat in omnibus aegre;
 extorquebat enim vitam vis morbida membris.
 [incomitata rapi certabant funera vasta.] 1225
 nec ratio remedi communis certa dabatur;
 nam quod ali dederat vitalis aeris auras
 volvere in ore licere et caeli templa tueri,
 hoc aliis erat exitio letumque parabat.
 illud in his rebus miserandum magnopere unum 1230
 aerumnabile erat, quod ubi se quisque videbat
 implicitum morbo, morti damnatus ut esset,
 deficiens animo maesto cum corde iacebat,
 funera respectans animam amittebat ibidem.
 quippe etenim nullo cessabant tempore apisci 1235
 ex aliis alios avidi contagia morbi,
 1245 lanigeras tamquam pecudes et bucera saecla.
 1237 idque vel in primis cumulabat funere funus.
 nam quicumque suos fugitabant visere ad aegros,

far away, to escape the acrid stench, or where any one had tasted, it drooped in near-following death. Though hardly at all in those days would any bird appear, or the sullen breeds of wild-beasts quit the forests. Many would droop with disease and die: above all faithful dogs would lie stretched in all the streets and yield up breath with a struggle; for the power of disease would wrench life from their frame. Funerals lonely, unattended, would be hurried on with emulous haste. And no sure and universal method of cure was found; for that which had given to one man the power to inhale the vital air and to gaze on the quarters of heaven, would be destruction to others and would bring on death. But in such times this was what was deplorable and above all eminently heart-rending: when a man saw himself enmeshed by the disease, as though he were doomed to death, losing all spirit he would lie with sorrow-stricken heart, and with his thoughts turned on death would surrender his life then and there. Ay for at no time did they cease to catch from one another the infection of the devouring plague, like to woolly flocks and horned herds. And this above all heaped death on death: whenever any refused to attend their own sick, killing neglect soon after

vitai nimium cupidos mortisque timentis 1240
 1240 poenibat paulo post turpi morte malaque,
 desertos, opis expertis, incuria mactans.
 qui fuerant autem praesto, contagibus ibant
 atque labore, pudor quem tum cogebat obire
 blandaque lassorum vox mixta voce querellae. 1245
 1246 optimus hoc leti genus ergo quisque subibat.

 inque aliis alium, populum sepelire suorum
 certantes: lacrimis lassi luctuque redibant;
 inde bonam partem in lectum maerore dabantur.
 nec poterat quisquam reperiri, quem neque morbus 1250
 nec mors nec luctus temptaret tempore tali.
 Praeterea iam pastor et armentarius omnis
 et robustus item curvi moderator aratri
 languebat, penitusque casa contrusa iacebant
 corpora paupertate et morbo dedita morti. 1255
 exanimis pueris super exanimata parentum
 corpora nonnumquam posses retroque videre
 matribus et patribus natos super edere vitam.
 nec minimam partem ex agris is maeror in urbem
 confluit, languens quem contulit agricolarum 1260
 copia conveniens ex omni morbida parte.

would punish them for their too great love of life and fear of death by a foul and evil death, abandoned in turn, forlorn of help. But they who had stayed by them, would perish by infection and the labour which shame would then compel them to undergo and the sick man's accents of affection mingled with those of complaining: this kind of death the most virtuous would meet. * * and different bodies on different piles, struggling as they did to bury the multitude of their dead: then spent with tears and grief they would go home; and in great part they would take to their bed from sorrow. And none could be found whom at so fearful a time neither disease nor death nor mourning assailed.

Then too every shepherd and herdsman, ay and sturdy guider of the bent plough sickened; and their bodies would lie huddled together in the corners of a hut, delivered over to death by poverty and disease. Sometimes you might see lifeless bodies of parents above their lifeless children, and then the reverse of this, children giving up life above their mothers and fathers. And in no small measure that affliction streamed from the land into the town, brought thither by the sickening crowd of peasants meeting plague-stricken from every side. They would fill all

omnia conplebant loca tectaque; quo magis astu
 confertos ita acervatim mors accumulabat.
 multa siti protracta viam per proque voluta
 corpora silanos ad aquarum strata iacebant 1265
 interclusa anima nimia ab dulcedine aquarum,
 multaque per populi passim loca prompta viasque
 languida semanimo cum corpore membra videres
 horrida paedore et pannis cooperta perire
 corporis inluvie, pelli super ossibus una, 1270
 ulceribus taetris prope iam sordique sepulta.
 omnia denique sancta deum delubra replebat
 corporibus mors exanimis onerataque passim
 cuncta cadaveribus caelestum templa manebant,
 hospitibus loca quae complerant aedituentes. 1275
 nec iam religio divom nec numina magni
 pendebantur enim: praesens dolor exsuperabat.
 nec mos ille sepulturae remanebat in urbe,
 quo pius hic populus semper consuerat humari;
 perturbatus enim totus trepidabat, et unus 1280
 quisque suum pro re *praesenti* maestus humabat.
 multaque *res* subita et paupertas horrida suasit;
 namque suos consanguineos aliena rogorum

places and buildings: wherefore all the more death would pile them up in heaps as they were thus huddled together in the upper town. Many bodies drawn forth by thirst and tumbled out along the street would lie extended by the fountains of water, the breath of life cut off from their too great delight in water; and over all the open places of the people and the streets you might see many limbs drooping with their half-lifeless body, foul with stench and covered with rags, perish away from filth of body, with nothing but skin on their bones, now nearly buried in noisome sores and dirt. All the holy sanctuaries of the gods too death had filled with lifeless bodies, and all the temples of the heavenly powers in all parts stood burdened with carcasses: all which places the wardens had thronged with guests. For now no longer the worship of the gods or their divinities were greatly regarded: so overmastering was the present affliction. Nor did those rites of sepulture continue in force in the city, with which that pious folk had always been wont to be buried; for the whole of it was in dismay and confusion, and each man would sorrowfully bury as the present moment allowed. And the sudden pressure and poverty prompted to many frightful acts; thus with a loud

insuper extructa ingenti clamore locabant
subdebantque faces, multo cum sanguine saepe 1285
rixantes potius quam corpora desererentur.

uproar they would place their own kinsfolk upon the funeral piles of others, and apply torches, quarrelling often with much bloodshed sooner than abandon the bodies.

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Lucretius Carus, Titus
Titi Lucreti Cari De rerum
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